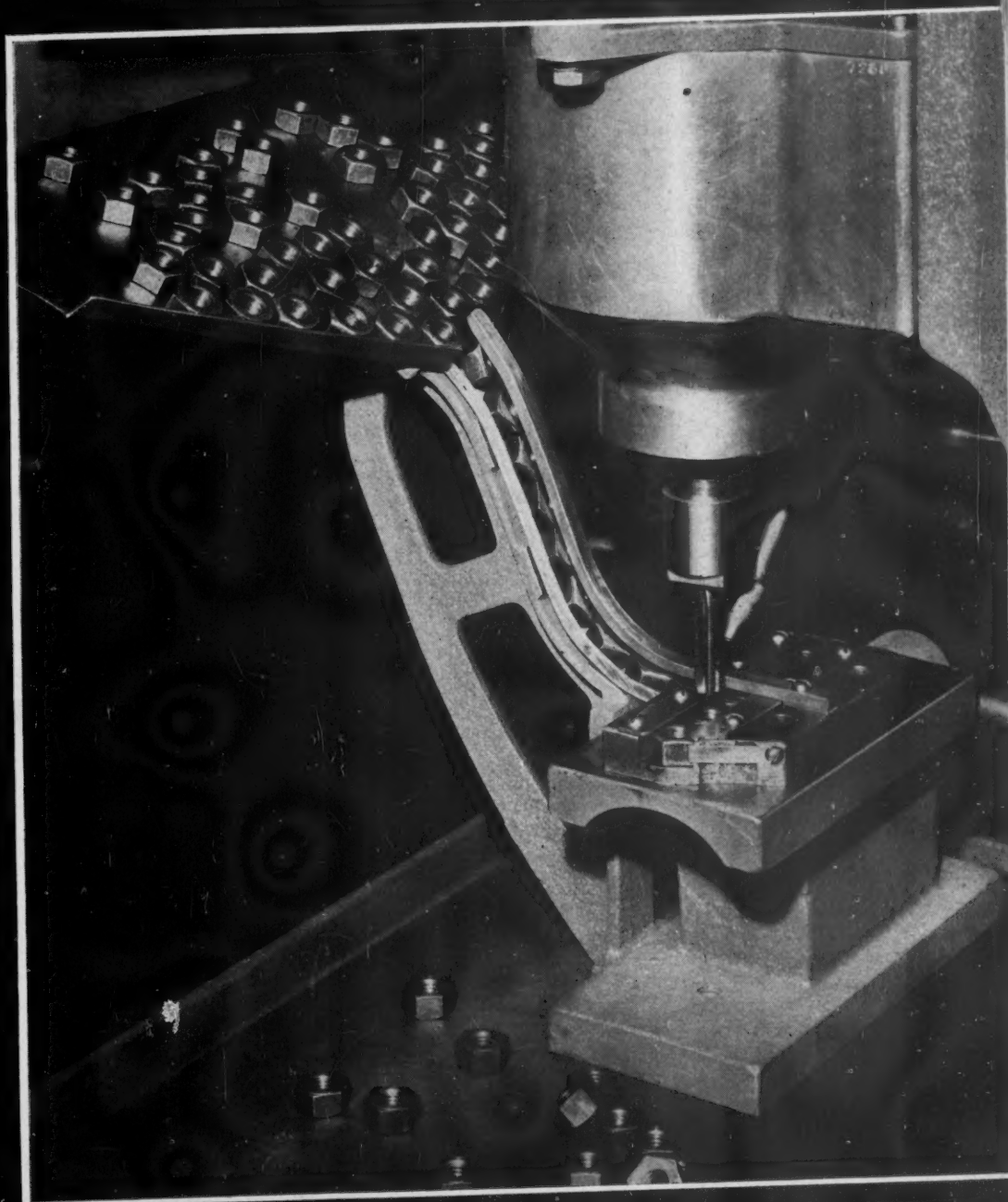


Industrial

Standardization



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Readers Write

Questions Use of "Engine" and "Motor"

Milwaukee Section
Society of Automotive Engineers, Inc
Milwaukee, Wisconsin

Gentlemen: In our operations we have occasion to use the word "engine," as pertaining to gasoline and diesel internal combustion engines and also the word "motor," as pertaining to electric motors. In the 1940 SAE Handbook, page 775, we find with reference to the automobile engine, the following:

"The name engine should be used rather than motor to avoid confusion with electric motors."

As pertaining to gasoline engines, diesel engines, steam engines, we feel confident the use of the word, "engine," is correct; also as pertaining to electric motors, we feel satisfied in using the word "motor." However, we are not acquainted with any established standard of nomenclature as pertaining to the words "engine" and "motor"; in fact, when we think in terms of the more recent gas turbine and jet engines which are also referred to as a reaction type motor, we wonder where the dividing line is in the use of the word "engine," as against the use of the word "motor."

G. J. HAISLMAIER
Treasurer, Milwaukee Section

• • No definitions of the two concepts have as yet been formulated as standard conceptions under the procedure of the ASA, nor is any place known where such definitions can be found. Possibly it may be necessary to have this question considered by a committee.

Need New Data On Exhaust Systems

The Celon Company
Madison, Wisconsin

Gentlemen: We have in our library a pamphlet published by you in 1936 entitled "Fundamentals Relating to the Design and Operation of Exhaust Systems." This pamphlet has proven invaluable in past years in maintaining a satisfactory exhaust system for our Madison Plant.

We would like to know if there have been any recent publications relative to

Company Members

More than 2100 companies hold membership either directly or by group arrangement through their respective trade associations

exhaust systems, especially those in the viscose industry.

E. A. VAUGHAN
Engineering Department

• • The Sectional Committee on Safety Code for Exhaust Systems, Z9, which developed the "Fundamentals Relating to the Design and Operation of Exhaust Systems" has recently had a reorganization meeting at which a revision of this document was discussed. To date, however, there is nothing later than the 1936 edition although a revision may be prepared within the next few months.

What Screw Threads Are Used in Europe?

Columbus Bolt Works Company
Columbus, Ohio

Gentlemen: . . . Do you know whether there is any published information which would show that, on the continent of Europe, Whitworth Thread is generally purchased as opposed to American Standard Threads or Metric Threads, or whether metric dimensions are used for head sizes, lengths, etc? Also, we would like to have any information available on the general standards as they exist in the Far East.

W. A. CARLILE, JR
Executive Vice-President

• • In reply to Mr Carlile's inquiry, the American Standards Association advised that most continental European countries had adopted, through a national standards organization (similar to our ASA), national standards for both Whitworth and Metric threads. Due to the fact that Whitworth threads were introduced into Continental practice long ago by British industry and therefore widely used before the introduction of metric threads, both systems have been adopted as national standard. France, where only metric threads are considered standard, is the exception.

National standards for Whitworth threads in various Continental countries are given in metric units—the original inch dimensions converted to millimeters. All Continental Whitworth threads are interchangeable with the British Standard Whitworth thread. Mr Carlile was referred to the August 1945 issue of INDUSTRIAL STANDARDIZATION for information on national standards for metric threads.

Our Front Cover

In the tapping of nuts, a loading tray at top of chute simplifies handling and speeds production. For latest data on cut and ground thread taps, see page 59. (Photo courtesy of American Machinist.)

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Reg. U. S. Pat. Off.

Ruth E. Mason, Editor

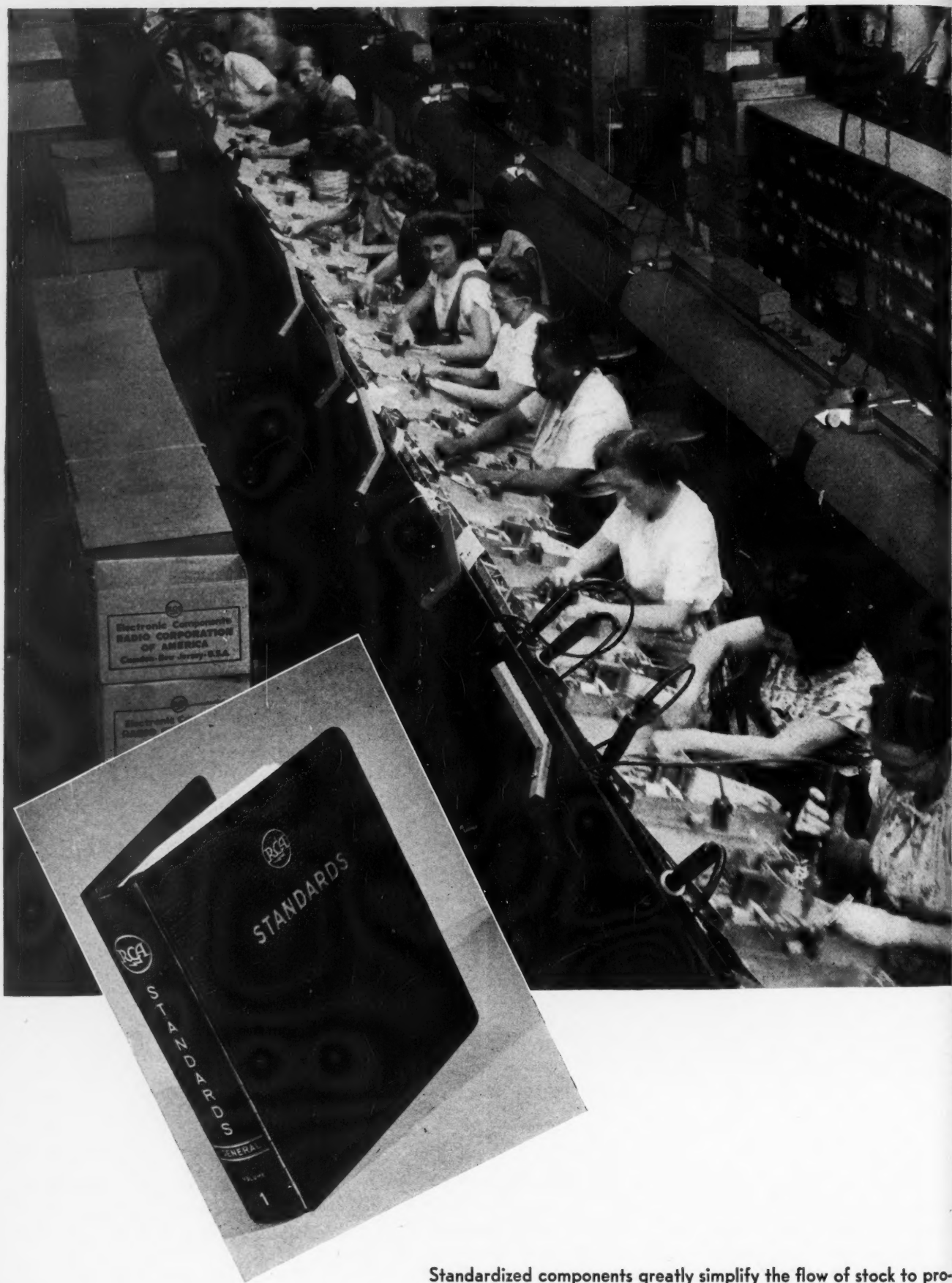
Janet Meldon, Assistant Editor

Standardization is dynamic, not static. It means
not to stand still, but to move forward together.

Single copy, 35 Cents

July 1948

Subscription price \$4.00 per year (foreign \$5.00). Special to schools and libraries \$2.00 (foreign \$3.00). Re-entered as second class matter February 18, 1948, at the post office at New York, N. Y., under the Act of March 3, 1879.



Standardized components greatly simplify the flow of stock to production assembly lines. The standards themselves (insert) are given greater respect and more careful handling when the binder (the "housing") is of good grade, neatly and distinctively labeled.

What It Takes for

A Good Standards Department

By S. H. Watson

WHERE formerly apathy towards and, in some cases, fear of standardization existed, today there are hundreds of companies, large and small, with a healthy understanding of standardization as an effective tool in modern industrial management. Some have strengthened previously initiated programs, others have established standardizing units, and others still pose the questions "How do we begin?" and "What are the most effective steps in initiating and progressively building a company standardizing activity?"

In discussing these questions with a view to the needs of many companies of all sizes engaged in a wide variety of businesses, certain fundamentals can be quite firmly established. Many other important considerations depend upon the nature of the business, type of organization, geographical layout, etc, and can be answered only from within the company by analyzing the needs peculiar thereto.

In some companies and probably, in particular, the smaller ones, management may find that its people are already doing a reasonably good job of standardization although what is being done may never have been thought of prominently as standardization. Standardization, after all, in a broad sense, is good engineering, smart procurement and material control, efficient manufacturing and merchandising. I recall a tour I made about two years ago through the Detroit plant of a moderately sized, modern machine tool company. Although the company had no formal standardizing activity, the results of standardization were everywhere apparent. What I saw was the inevitable result of a good over-all engineering job which had included long-range thinking and planning.

Emphasis on Materials and Components Used in Product

Although industrial standardization is almost limitless in scope, greatest

Standardization pays off, says Mr. Watson, who speaks with authority from his experience with the effective standards organization of the Radio Corporation of America, RCA Victor Division. With a working knowledge of procurement and a good technical background, a standards engineer makes his work pay for his company

emphasis is placed upon that area pertaining to the materials and components purchased or fabricated to form a part of a company's product and the design practices, processes, test methods, and safety requirements involved.

In starting a company program of standardization, a first and quite obvious step is the selection of the individual who is to supervise the activity. If we are to be guided by the example of most companies currently engaged in standardization, the manager of standardizing should be a member of the engineering department and report directly to the chief engineer of the company. Some com-

panies assign the responsibility to the director of purchasing with excellent results. As to individual qualifications, I can think of none that a standards engineer should not have unless we consider "rugged individualism" as a qualification, in which case it should not be included in the list of desirable traits.

Should Be Good Business Man With Technical Background

The ideal standards engineer, not only the manager but also those who are subsequently added to his staff, as and if the need becomes apparent, should be well informed technically, particularly in those fields of engineering upon which the company's business depends. He should have several years of supporting experience, preferably with the company for which he is to standardize. He should be a good business man. Standardization is good business and the program of any company should be guided with a critical eye to pay-off. Effort should be concentrated in the areas of most favorable return.

The standards engineer must have a working knowledge of the fundamentals of procurement and the sources to which the bulk of the company's buying is directed. When a company starts an organized standardizing program, the marriage between purchasing and standardizing personnel is a close and lasting one.

S. H. Watson, Radio Corporation of America, RCA Victor Division, was one of the principal speakers at the Company Member Conference in Chicago April 8. His talk on how to organize a company standards department and what makes a good standards engineer will undoubtedly be of interest to others working on company standards who were not at the meeting. For their benefit the paper is abstracted here.

The purchasing agents constantly seek standards that will streamline buying and eliminate unwarranted diversification. The standards engineers seek the advice of the purchasing agents in the promulgation of standards.

A knowledge of manufacturing and particularly the company's manufacturing facilities is important. What may be a good standard for one company may be a poor one for another lacking proper equipment.

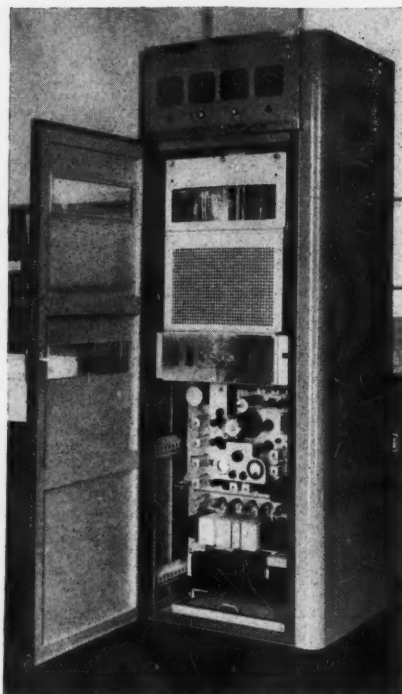
Need Understanding Of Market Requirements

The character of many of the standards to be established by a company will depend to a great extent upon the nature of the market it serves. An understanding of market requirements, therefore, is invaluable to the standards engineer in recognizing the significance of sales and merchandising considerations in certain of the standards he develops.

Briefly, the standards engineer finds himself involved, at one time or another, in coordination and consultation with personnel representing most every phase of industrial management and he should be geared accordingly.

Usually a newly appointed standardizing manager will first acquaint himself with the history and background of standardization and the practices and policies of companies well established in standardization. He selects one or more whose pattern seems to best fit his requirements and arranges to visit their plants for detail discussions. These visits are normally welcomed by the companies contacted since they provide a fresh viewpoint and are generally broadening. Discussions with members of the staff of the American Standards Association in New York are most helpful, in that, from this top central point any line of standardization can be traced and pursued. The report on industrial standardization covering company organization, practices, and procedures issued by the National Industrial Conference Board in 1947 is one of the best reference works available on company standardization. It covers the results of a survey of approximately 100 companies engaged in organized standardization.

Of all the writings on standardization, the often quoted address by Dr Frank B. Jewett at the annual meeting of the American Standards Association in New York in December of 1937 is probably the best known classic. Its text will be found most



Standardized cabinets and enclosures relieve the design engineer of an appreciable design burden.

helpful as a guide in company and individual standardization policy.

A most important step in initiating a formal company standardization program is the one taken immediately before actual work on standards is begun—that of introducing the program in detail to key men in Engineering, Purchasing, Manufacturing, and Merchandising. These are the people who are to experience the benefits of standardization. Much depends upon their attitude and cooperation.

In proceeding with the development of company standards, and, for that matter, as a continuing policy, effort should be applied where the need is greatest and most widespread. These areas are usually also the most remunerative. During the introductory stage, management and key personnel have undoubtedly touched upon certain fertile fields.

The first few specific items selected for standardization—the guinea pigs, so to speak—should preferably be of the more obvious, short-term type; items, for instance, that show up as a result of a careful analysis of a company's over-all buying for a 12-month period. Direct leads may come from engineers, procurement men, or manufacturing authorities in the form of comments suggesting that too many different kinds of brass, too many bar diameters, etc., are being purchased and handled. The successful completion and introduction of a few choice standards of this type, items that *really do something* for several people and for the company can go far in assuring continued acceptance and success of the program.

It is immediately before or during the preparation of the first standards that format, numbering, distribution, and housing are developed. All merit careful consideration. Format sets the character of an official, authoritative document. Numbering must be flexible to permit inserting pages and major sections in addition to those anticipated in an initial projected index. Distribution should embrace all who may have occasion to apply company standards or influence intelligent use thereof. Housing, usually binders, should be of a good grade, neatly and distinctively labeled to promote respect and careful handling.

In conclusion, in the conduct of company standardization, of the many pitfalls to be recognized and constantly guarded against the following are most important:

1. As far as possible make all interested personnel a party to the standard and its development.
2. Avoid undue limitations and restrictions. Recognize the actual and potential needs of users in each standard.
3. Avoid premature standardization and at the same time avoid undue delay in establishing standards.
4. Recognize standardization as a long-range activity of prime importance. Avoid diverting standards personnel to exigencies of the moment. Standardization goes far towards eliminating emergencies and confusion in the fields thoroughly covered.

"Of major importance, under the heading of Company Standardization, is liaison with the technical and trade associations in developing national standards and the reduction of existing industry and American Standards to practice."

—S. H. Watson

Staff Executives Conference Will Consider How to Promote Use of Standards

"Methods of Promoting Acceptance of Nationally Recognized Standards" will be the subject discussed at the luncheon meeting of the Conference of Staff Executives of Member-Bodies of the American Standards Association October 21. This will be during the Annual Meeting of the ASA at the Waldorf-Astoria Hotel. A panel of four or five speakers covering various aspects of acceptance of standards by regulatory bodies and by industry will take part in the program. The meeting will be open to officers and staff executives of all the associations and technical societies that are members of the American Standards Association.

At a recent meeting of the Conference two principal subjects were discussed. A. S. Boisfontaine, Southern Pine Inspection Bureau, presented "What Standardization Can Mean to Industry—as Expressed Through Trade Associations," citing the long experience of the lumber industry with grading standards and inspection. The viewpoints of other industries were presented by Lester W. Benoit, Manufacturers Standardiza-

tion Society of the Valve and Fittings Industry; C. A. Young, American Petroleum Institute; Harry C. Plummer, Structural Clay Products Institute; Percy Bugbee, National Fire Protection Association; and W. J. Donald, National Electrical Manufacturers Association.

Charles M. Parker, American Iron and Steel Institute, presented "Trade Association Policies, Organization, and Procedure in the Development of Standards," which was discussed by W. J. Donald, National Electrical Manufacturers Association and T. E. Veltfort, Copper and Brass Research Association.

All these papers have been collected in a binder and can be obtained without charge from the American Standards Association.

At a recent meeting of the Executive Committee of the Conference, George Porter Paine, executive assistant to the chairman of the Executive Committee of the American Standards Association, was named secretary to fill the vacancy left by the death of C. B. LePage of the American Society of Mechanical Engineers.

The Need for Standardization

"Industrial standardization has its roots in the needs of commerce; its growth is due to the recognition of its value and to the ever-expanding number and complexity of articles of commerce; its fruit is improvement in the products of industry and improvement in commercial transactions. I would stress that the end of a technical effort is the production of something for someone to use, and that it can reach the user only through the channel of commerce, which is the bloodstream of national and international well-being. One of the greatest aids to business is a satisfied buyer, and it may be confidently asserted that the community today is ready to concede that the producer is entitled to obtain a fair price for his product, and that the buyer is entitled to get value for his money. Where the pound or the yard applies, the buyer has assurance that he is getting the quantity he is paying for. Is it not equally essential that the buyer should have a corresponding assurance that he is getting other significant properties?"

—Percy Good, Director of the British Standards Institution; President of the British Institution of Electrical Engineers. Quoted from Mr Good's Inaugural Address before the IEE.

Photograph Plumbing Tests Through Plastic Pipes

For the first time, plumbing technicians are able to watch the action of water through an entire plumbing system. Using plastic pipes and fittings which make the system completely transparent, the Department of Agriculture Motion Picture Division has been able to photograph the plumbing tests conducted by the National Bureau of Standards to reveal some of the conclusions of the Uniform Plumbing Code Committee. This code, now completed, is being circulated to industry for comment.

The movie itself, which covers only traps, self-siphonage, and stack and wet venting, will be made available in the near future.

The work of the Uniform Plumbing Code Committee is carried on under the supervision of the Housing and Home Finance Agency which also has been responsible for under-

taking the motion pictures of the test. Chairman of this committee is Vincent T. Manas, who, for the past 12 years, has been connected with the federal government in charge of plumbing and heating on large government projects. He has recently become technical editor of *Plumbing and Heating Business*.

Dr Ayres Heads Consumer-Retailer Council

Dr Ruth Ayres has been named managing director of the National Consumer-Retailer Council to direct the extension of the Council's 12-year program of pointing out good values to consumers and retailers in communities throughout the country.

Dr Ayres is active in the consumer work of the ASA, serving as an alternate on the Consumer Goods committee, and as a member of the sectional committees dealing with sheets and sheeting, L4, and bedding and

upholstery, L12. In each case, she represents the American Association of University Women.

One of the Council's most active undertakings now is the organization of intensive local cooperation between retailers and home economics educators in schools. Mrs Carol Willis Moffet, a member of the ASA Board of Directors, is chairman of the committee.

Newly Published Standard Gives Data on

Spindle Noses and Chucks



Engine lathe equipped with Type D American Standard spindle nose.

Pratt & Whitney

Provides standard spindle noses and chucks for all types and sizes of lathes; Type L spindles now included

By John E. Lovely

ALL the latest information on spindles and chucks for lathes has been combined in one publication in the new edition of the American Standard Spindle Noses for Tool Room Lathes, Engine Lathes, Turret Lathes, and Automatic Lathes, which, it is expected, will aid industry materially in the use of standardized spindle noses. The spindles included cover requirements for all types and sizes of lathes from 6-inch bench lathes up to the largest turret

lathes and the large hollow spindle lathes. This new (1948) edition supersedes the 1936 edition known as the American Standard Lathe Spindle Noses for Turret Lathes and Automatic Lathes, B5.9-1936.

Although most of the material in the 1936 standard is retained in the new edition, the 1948 publication also gives specifications for the Type L spindle which did not appear in the earlier document. In addition it includes dimensions of other sizes of

spindle noses which have been developed since 1936. It also gives more complete information on gages and more extensive recommendations on the use of these spindles.

The text has been rewritten and the tables have all been redrawn to present the subject matter more clearly and in better form.

The new standard contains sections on nomenclature, gages and methods of gaging, chucks, spindle noses recommended for bench lathes, tool

room lathes, engine lathes, turret lathes, single spindle automatic lathes, and other applications. It includes 39 full-page tables giving complete dimensions and tolerances for all sizes of Types A, B, D, and L spindle noses as well as dimensions of the backs of mating chucks and face plates and dimensions of working gages and inspection gages to maintain interchangeability.

The 1936 edition of the American Standard on Lathe Spindle Noses, B5.9-1936, now superseded, was developed by Technical Committee No. 4 on Spindle Noses and Collets, appointed by Sectional Committee B5 on the Standardization of Small Tools and Machine Tool Elements. Technical Committee No. 4 held its original organization meeting in New York on December 5, 1928. Technical Committee No. 11 also was appointed by Sectional Committee B5 to develop chucks and chuck jaws and held its organization meeting in New York on December 4, 1928. These two committees cooperated closely with each other in developing these spindle noses as well as the mating chucks and face plates.

Type D and Type L Spindle Noses Both Favored by Lathe Builders

When several proposed designs were originally presented to Technical Committee No. 4 for consideration, a taper key drive spindle nose, now designated as Type L, was included. Ever since that time some engine lathe builders have favored the Type L spindle nose for engine lathes while others have favored the Type D. It was hoped by Technical Committee No. 4 that one style of spindle nose might be used for all engine lathes, but in the meantime many thousands of spindles of both types were made. Some engine lathe builders as well as users still favor one type while others favor the other. It became apparent that because of the large number of each type in use, dimensions of both types should be made available to the public in a convenient and authoritative form.

Therefore, in 1943 the Engineering Committee on Standardization of Engine and Tool Room Lathes, appointed by the National Machine Tool Builders' Association, was formed for further study on the standardization of various elements of engine lathes and tool room lathes, including spindle noses particularly. As a result of its study, this committee recommended that Type D and Type L

John E. Lovely, Vice-President and Chief Engineer of Jones & Lamson Machine Company, is chairman of Technical Committee No. 4 on Spindle Noses and Collets for Machine Tools of Sectional Committee B5 on Small Tools and Machine Tool Elements.

This committee has developed the new American Standard Spindle Noses for Tool Room Lathes, Engine Lathes, Turret Lathes and Automatic Lathes, B5.9-1948, published by the American Society of Mechanical Engineers, one of the sponsors. (See description of the committee's work on page 58.) Copies are available from the American Standards Associations for 85 cents each.

spindle noses be established as alternate American Standards for engine lathes. These recommendations were approved by the Engine Lathe Group of the National Machine Tool Builders' Association in October 1944, and were approved by Sectional Committee B5 in November 1944.

Sectional Committee B5 decided at that time that the American Stand-

ard for Lathe Spindle Noses, B5.9-1936, should be revised to include these specifications for engine lathes and to include the additional sizes of other spindles which had been developed since that time. The task of making this revision was assigned to Technical Committee No. 4 which prepared the new standard.

The new material includes two smaller sizes of Types A, B, and D spindles which run at high speeds. inch; one larger size of Type A and B spindles, namely the 28 inch; the complete series of Type L spindles in five sizes; dimensions of the backs of chucks and spindle fixtures to mate with all spindles, as well as the approved dimensions of gages for all sizes of spindle noses, chucks, and face plates.

Instructions have been added for drilling balancing holes for Type A spindles which run at high speeds.

The spindles and gages which appear in both the 1936 standard and this new edition are interchangeable and identical except for the undercuts at the large end of the taper in the Types A, B, and D spindles. Those now shown are of an improved design. Another exception is that the 4-inch Type D-1 spindle nose is now shown to take three cam lock studs instead of six in order to allow a larger hole through the spindle. These two minor changes in the 1936 standard have been in production for some time and represent better practice.

The Type C spindles of the 1936



Jones and Lamson.

A modern turret lathe equipped with the Type A spindle nose.

standard are discontinued as no need for them is foreseen.

This new publication continues to specify the same sizes of spindle noses for different sizes of turret lathes and automatic lathes, but the recommendations for the sizes of spindle noses for specific sizes of bench lathes, tool room lathes, and engine lathes have been added as a result of recommendations by the engine lathe builders.

Many thousands of turret lathes and automatic lathes with these Type A or Type B spindles and many thousands of engine lathes with Type D or Type L spindles have been made since 1936 and are now in use in this country and other countries throughout the world.

Most of the engine lathe builders and all of the builders of turret lathes and automatic lathes are now furnishing their machines equipped with spindle noses of this 1948 standard and the mating chucks are being furnished by practically all of the chuck manufacturers.

Although these spindles were developed originally for engine lathes,

turret lathes, and automatic lathes, they are being used on the work spindles of internal grinding machines and thread grinders. They may be used advantageously wherever chucks or fixtures have to be mounted accurately and rigidly on revolving spindles.

Houser New Head of B5 Committee

P. L. Houser, Manufacturing Research Department of the International Harvester Company, was named chairman of the Sectional Committee on Small Tools and Machine Tool Elements, B5, early this year. A. F. Murray, Works Manager of the Electrolux Corporation, is vice-chairman.

The committee has been active since the war in bringing standards under its jurisdiction up to date and in addition to the two new standards announced in this issue, has completed an enlarged and revised edition of the American Standard Circular and Dovetailed Forming Tool Blanks, B5.7-1943. This revised standard has been submitted to the American Standards Association for approval by the sponsor organizations. In addition, two new standards, one on straight cutoff blades and the other on markings for grinding wheels have been approved by the sectional committee and sent to the sponsors. A revision of the American Standard on Reamers, B5.14-1941, and a peacetime edition of the American War Standard on Accuracy

of Engine and Toolroom Lathes, B5.16-1941, are in the final stages in the committee itself. A new standard for the designations and working ranges of surface grinding machines is also nearing completion.

The committee is carrying on its work under the sponsorship of the American Society of Mechanical Engineers, Metal Cutting Tool Institute, National Machine Tool Builders' Association, and the Society of Automotive Engineers, Inc.



P. L. Houser

Annual Meeting Slated for October

The date for the Thirtieth Annual Meeting of the American Standards Association has been set for October 20, 21, and 22 at New York's Waldorf-Astoria Hotel. Detailed plans are still being made but the general schedule will be as follows:

Company Member Conference, October 20, Starlight Roof.

Conference of Staff Executives of the Member-Bodies of the ASA, October 21.

Correlating and Sectional Committee Meetings, October 21.

Standards Council, October 22, Astor Gallery.

Board of Directors, October 22, Room 4M.

Joint Session—Board of Directors and Standards Council, October 22, Wedgwood Room.

Electrical Safety Code Now in One Volume

The first five parts of the fifth edition of the National Electrical Safety Code, previously issued separately as National Bureau of Standards Handbooks H31 to H35, are now available in one 408-page cloth-bound volume as NBS Handbook H30. Each of these parts has been approved by the American Standards Association as an American Standard.

Prepared originally in answer to the large number of fatalities occurring among electrical workers, the National Electrical Safety Code is now used by over half of the states in their power transmission requirements, as well as by municipal governments, electric power companies, telephone and telegraph systems, and railways.

The page numbers of the five separate documents have been retained in the new compilation to assist in the location of specific code rules regardless of the volume used. An index to all five parts is also provided.

The five standards, all reaffirmed last year, are:

- C2.1-1941 Safety Rules for the Installation and Maintenance of Electrical Supply Stations
- C2.2-1941 Safety Rules for the Installation and Maintenance of Electric Supply and Communication Lines
- C2.3-1941 Safety Rules for the Installation and Maintenance of Electric Utilization Equipment
- C2.4-1939 Safety Rules for the Operation of Electric Equipment and Lines
- C2.5-1940 Safety Rules for Radio Installations

Copies of the new volume are available at \$1.25.

Industrial Changes Reflected in Revised Standard for Taps

By Charles M. Pond

EIGHTEEN years ago the first national standard for cut and ground thread taps was approved by the American Standards Association, after more than two years of work and research by Technical Committee No. 12 of the Sectional Committee on Small Tools and Machine Tool Elements. Nine years later the standard was revised to incorporate numerous changes and modifications which time had indicated to be desirable.

Another nine years have passed and during that time even greater industrial changes have taken place—changes which have vitally influenced the many factors that enter into a standard for threading tools.

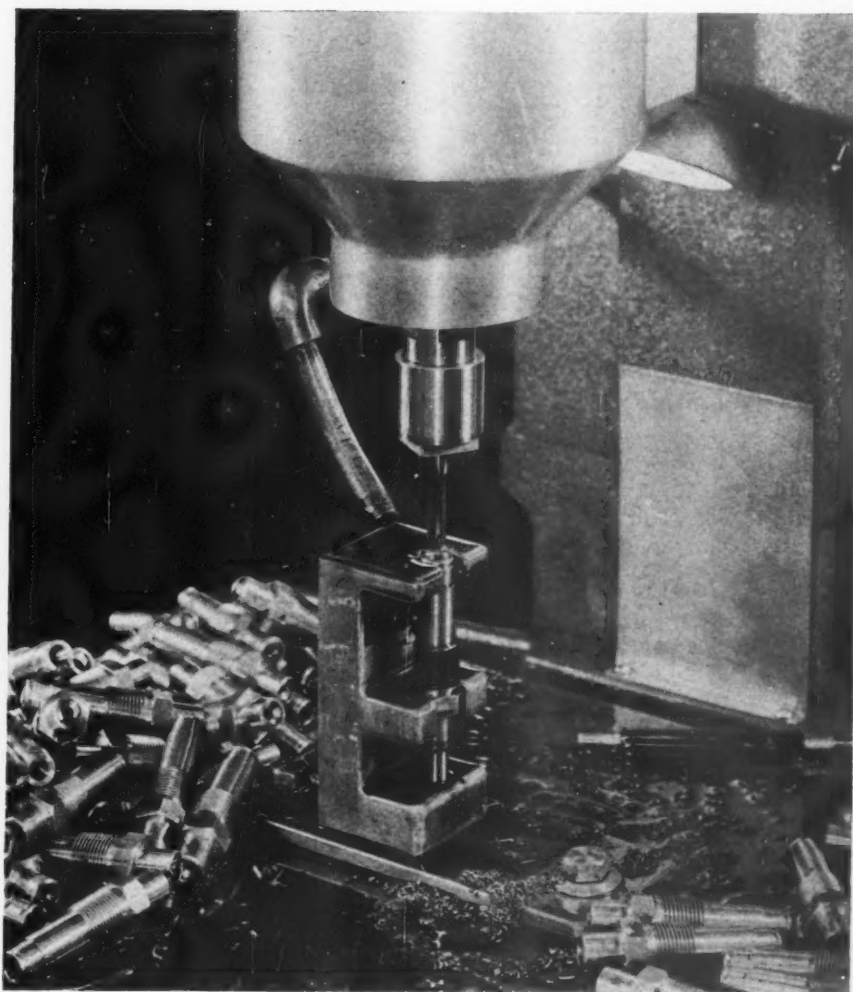
Even today changes are being brought about as a result of the activities of the various commissions which are at work on national and international screw thread standards. It was the belief of Technical Committee No. 12 that there was little prospect of thread standards becoming stabilized in the immediate future, and that it would be well to issue a revised standard incorporating the various steps in progress which had been taken to date. It was with this thought in mind that the committee revised the 1939 tap standards and submitted them to the membership for criticism or approval.

As a result of this action and the close cooperation of the American Society of Mechanical Engineers, and

other interested organizations, we were able to prepare the 1948 revision which has just recently been published.

Contrary to the impression sometimes prevailing, changes in manufacturers' standards and especially in taps are brought about not by the initial action of the tap manufac-

turer, but by crystallization of consumer demand combined with progress reports of various committees intimately associated with the work. It will, therefore, be found that this revised standard for cut and ground thread taps incorporates the changes which industry has demanded, and which the manufacturers of taps and



American Machinist

The second operation on a screw machine part consists of tapping a hole in one end of the part, while the piece is held in this simple fixture.

Charles M. Pond, Vice-President of Pratt & Whitney Company, is chairman of Technical Committee No. 12 of the Sectional Committee on Small Tools and Machine Tool Elements.

dies have organized themselves to provide.

A careful study of this latest revision will soon indicate that fundamentally the prior standard has remained practically unchanged. The various styles of taps still retain their general over-all dimensions and in almost every case, the effective size of the tap is in accord with past and long tested practice.

Recognize Recent Demand For New Styles and Sizes

However, the years have indicated a demand for certain new styles and sizes and, in many cases, demand for certain of the old standard tools has disappeared. This new publication has attempted, therefore, to incorporate all the new styles for which there is an industrial demand and has omitted a number of the old standards, which were no longer desired. As an example of this condition, a 2-fluted hand tap was quite popular a number of years ago—but today industry apparently prefers the 3-fluted tap to the extent where it seems wise to drop hand taps with two flutes. Again there was a period when the so-called stub machine screw taps were considered essential, but the experience of tap manufacturers indicates that the demand has practically evaporated and stocks have had to be scrapped or otherwise disposed of—consequently, the stub tap has been omitted from the new edition. Other additions and eliminations will be observed during a close analysis of the material presented. With the exception of pipe taps, few changes will be observed in the tables—but in the case of pipe taps, the results of the deliberation of some of the standardization boards will be apparent. The dryseal taps, for example, appear for the first time along with the new $\frac{1}{16}$ inch size, and formulas have been worked out to incorporate the new ideas.

It is the hope and expectation of the committee that the use of this revised edition will bring tap users as nearly up-to-date as is possible during this extremely volatile period.

Even as this is written, a new report is about to be issued incorporating a new size of bolt and nut known as the "A" and "B" standards, together with the Class 1, 2, and 3 standards, which are being carried down from the days of the National Screw Thread Commission.

Another committee is busily at work developing an international

standard which may result in a rounded thread form for highly stressed parts and here, again, agreement must be reached with British standardization personnel to decide what tolerances shall become a part of the international picture.

The committee had hoped to incorporate a more satisfactory standard for railroad tools and it is their hope that when another revision becomes necessary, the Association of American Railroads will be able to present a comprehensive standard which will fit their requirements and can be incorporated as an American Standard.

In closing, the committee find it difficult to fully express their appreciation for the cooperation, suggestions, and encouragement offered by such concerns as the General Motors Corporation, General Electric Company, Western Electric Company, Chrysler Corporation, the Metal Cutting Tool Institute, and others. The details of correspondence were handled most efficiently and helpfully through our friend, the late Clifford

B. LePage, whose help and experience went a long way towards smoothing out the paths of revision and certification.

The American Standard for Taps, Cut and Ground Thread, B5.4-1948, developed by Technical Committee No. 12 of the Sectional Committee on Small Tools and Machine Tool Elements, has just been published by the American Society of Mechanical Engineers. The work of this committee is sponsored by the American Society of Mechanical Engineers, the National Machine Tool Builders' Association, the Society of Automatic Engineers, and the Metal Cutting Tool Institute. Copies are available at \$1.50 each.

New Standards Department At Norris Company

The Norris Stamping and Manufacturing Company, Los Angeles, California, has announced the organization of a new Standards Department. Under the direction of W. C. Brainard, the department "handles the problem of equipment required, from specifications through delivery and installation, and develops efficient methods of production, manufacturing, and material handling."

Federal Specifications Changed to Larger Size

With the publication of its new *Outline of Form and Instructions for the Preparation of Federal Specifications* the Federal Specifications Board has put into effect a change in the size of Federal Specifications from 5 x $7\frac{3}{4}$ in. to 8 x $10\frac{1}{2}$ in. The larger size is the standard government letterhead size.

The new *Outline of Form*, prepared after comments from government departments and from the Industry Advisory Council had been studied, standardizes the form and phraseology in which purchase speci-

fications within the province of the Federal Specifications Board are to be prepared.

Copies of the *Outline* can be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D. C. at 15 cents a copy.

Regulate Use of X-Rays In Shoe Fitting

More stringent regulations governing the use of x-ray shoe fitting machines are now in effect through a new ruling by the New York City Board of Health.

Retailers using x-ray machines now have to obtain a \$5.00 permit for each machine, and the regulations also provide for periodic inspection. The rules also include: (1) Machines must be shielded for the protection of the public, customer, and operator; (2) A sign must be posted on the machine stating that examinations are limited to three in one day and not more than 12 in a 12-month period; (3) The machine must conform with the American Standard Safety Code for the Industrial Use of X-Rays, Z54.1-1946; and (4) Machine operators must be informed of the potential dangers in its operation.

Z16 Committee of Judges Gives 20 Decisions on Injury Rates

DECISIONS on 20 additional injury cases have been handed down by the Committee of Judges set up to interpret the American Standard Method of Compiling Industrial Injury Rates, Z16.1-1945. Because differences of opinion frequently arise as to how an injury involving unusual circumstances should be counted, the judges interpret the standard in doubtful cases to make the recording of accident frequency and severity statistics as uniform as possible.

The first 20 decisions of the committee were issued last year (see INDUSTRIAL STANDARDIZATION, June 1947, page 143).



CASE 21. A company asked for a decision on a back injury as follows: On December 16, 1946 an employee sustained a back injury in the regular course of employment. He was taken immediately to the company doctor for treatment. X-rays of the back were negative for fractures, dislocation, bone and joint disease. The company doctor barked the injured's back and strapped him for a strain. The injured complained and said his back was hurting too much and that he could not go home. The doctor sent him to a hospital for observation. The following day the injured was sent home, but for the following two weeks reported to the company doctor regularly for treatment. Apparently the injured did not work during these two weeks. After that time the injured decided to see his own physician. A second x-ray taken by the same doctor who took the x-ray for the company doctor showed negative. However, a spot x-ray taken by the Roentgenologist on January 13 indicated a fracture. The report to the injured's doctor stated, "Fracture of first Lumbar Vertebra in good position. Intervertebral spaces are within normal." There was a difference of opinion between the company doctor and the injured's doctor as to whether or not there was a fracture. The Committee of Judges decided that the case should definitely be included in the rates and the time charge should be the number of days of disability, on the assumption that no permanent injury was involved. Part of the reasoning behind this was that the opinion of the Roentgen-

Rulings on unusual accidents in compiling injury rates help provide uniform statistics for industrial accident prevention programs

ologist that there had been a fracture was more important evidence than the opinion of the ordinary physician.

CASE 23. A company wrote that an employee had reported to first-aid on April 15 that he had knocked the top off a boil. Information in the original letter from there on appeared to be somewhat vague, but in a subsequent letter, dated May 30, it appeared that the employee had not gone to the doctor until April 18. He did not work on the 18th and on that day the doctor opened the boil and he reported back to work on April 21. From consulting the calendar it was determined that April 18 had been on a Friday and the employee had returned to work on Monday, the 21st. It was agreed that from the information available it was difficult to make a definite decision on this case. It was finally agreed as follows: If the doctor authorized by the company was of the opinion that the employee was unable to work for one or more days and also that if it was the opinion of this doctor that the reason for the inability to work was that the employee had aggravated the severity of the boil by "knocking the top off," then the days lost should be charged as an industrial injury. Unless both of these conditions were in the affirmative, the case should not be counted.

CASE 24. A company had asked for a determination of the time charges in an amputation case where the second, third and fourth fingers of one hand had been amputated to the middle of the metacarpal bone, and the first finger had been amputated including part of the proximal phalange. In this case the thumb had been unaffected. The question was whether the time charge should be 3000 days for the loss of a hand or whether there was some basis for charging the partial loss of a hand. There was considerable discussion of the table under 4.3 of the standard, both with regard to the definite wording on a time charge for the hand and also in connection with the various notes at the end of the table. It was finally agreed that the injury, as presented by the company, was not properly covered under the present code. As a doubtful case the Committee of Judges suggested that this be considered as a partial loss of the hand, with days charged to be based upon competent medical opinion as to the percentage of loss of the hand. As a further suggestion the Committee was of the opinion that a charge of 2,400 days appeared to be reasonable for this injury.

It was agreed that this case and the wording of the table under 4.3 should be referred to the Z16 Committee in order that consideration might be given to a revision to include this type of injury. It was also brought out that for the sake of clarity the statement under "Fingers" to the effect that "tip, without either traumatic or surgical bone involvement, should be charged as the actual days of disability, if any," should be repeated just above, under the time charges for "Thumb". This same type of clarification should be included for "feet" and "toes."

CASE 25. A company reported a dermatitis case of a laboratory assistant handling routine testing of petroleum products. The employee went to work in October 1946. A skin irritation on his hands developed and he reported in November for first aid. He was given various skin creams and the condition alternately improved and became worse until February 1947 when it became suddenly worse. He was sent to a skin doctor. The doctor advised that he be transferred to a job not involving so much handling of petroleum products. Because there was no other job available, the worker remained home on compensation for 9 days, after which he went back to work on another job, where the skin condition cleared up.

The question in this case was whether the date of the injury should be charged as the day on which the worker first applied for first-aid treatment or the day on which he was forced to remain away from his job, or some other date. After discussion it was agreed that this dermatitis case should be charged to the date on which the existence of the injury was first recognized, which in this case was the date that the employee first came to the first-aid room in November.

CASE 26. A company requested a decision concerning an employee who had had repeated difficulty with his back. The company was particularly concerned with whether or not the injury to this employee in February 1947 should be included as an industrial injury. The employee had injured his back first while working in November 1939. After that he had had difficulty with his back in March 1940, May 1940, January 1941, April 1941 and he had further treatment for his back in May 1941 and July 1943. He had been in military service between 1943 and 1945. In February 1947 the employee was standing on a ladder and reached over to take

a hammer from his helper. He did not reach the hammer because he felt a sharp pain in his back, which resulted in 5 days lost from work. On June 2 the employee had gone to the dispensary again, stating that his back felt like it had for a few days before his injury in February.

The Committee of Judges finally agreed that the act of reaching for the hammer while on the ladder resulting in the strain in the back should be considered as an accident which aggravated the pre-existing back condition and it was voted that the February incident should be reported as a temporary total disability with a time charge of 5 days.

CASE 27. A company reported that an employee had fractured a small bone in his foot when he turned his ankle on a small flight of stairs descending to the recreation room. The details of the incident were as follows: The employee had arrived at work early. Noticing that he had about a quarter of an hour before starting work, he had gone to the recreation room to have a smoke prior to starting work. It was at this time that he had sustained the injury. The question was as to whether the disability should be classed as an industrial injury in accordance with paragraph 2.1.1.

It was agreed that it was entirely reasonable for an employee to report to work a quarter of an hour early and that time spent in the plant before going to work should be treated the same as during a rest period and the Committee of Judges, therefore, agreed that this injury should be counted in the rates.

CASE 28. A company reported that an employee had worn a blister on his hand while pulling a rope to start a small gas engine. Within a few days it became infected and the employee was placed in a hospital so that there could be a drainage of the infection. The question asked was whether or not this was an industrial accident or whether it was an occupational disease on the basis that an industrial accident is usually referred to as something that happened suddenly, unexpectedly, and is accompanied by violence. They questioned as to whether or not a blister fitted these conditions. It was definitely agreed that there had been an incident resulting in trauma. It was agreed that this should be considered as an injury arising out of and in the course of employment; that it should be counted in the rates and the days charged according to the total length of disability.

CASE 29. A railroad company reported that on July 17, two employees had been struck with a bolt of lightning. These employees were section men working on the railroad. It was questioned as to whether these should be counted as industrial injuries. In the discussion which followed it was suggested that employees working out of doors on the railroad were probably far more subject to be struck by lightning than members of the public; therefore, injuries arising out of such an incident should be considered as industrial injuries and the two cases should be counted as industrial injuries.

CASE 30. A company had written asking for an interpretation of three cases and had stated that these applied particularly to paragraph 3.3.2(f) of the standard.

The first case involved an employee who had slipped on a ladder resulting in comminuted fracture of the right lower third of right ulna. There had been no temporary total disability from this case but the doctor's report a few months later disclosed mild restriction in flexion of the elbow and in supination and pronation of the forearm; mild restriction in palmar and dorsal flexion of the wrist and in flexion of the thumb. This injury had resulted in a limitation of motion of the arm and hand, but had not resulted in any deformity or displacement. The Committee of Judges agreed that this injury should have been charged as a disabling injury at the time of the accident and that the time charge should be based upon medical opinion of the estimated permanent disability due to the loss of motion of the hand and arm. It was agreed that paragraph 3.3.2(f) did not apply to this case.

The second case included in the same letter involved an employee, who, on August 28, 1946, had caught his hand between a pump and a wrench resulting in comminuted fracture of terminal phalanx of left fourth finger. On March 20, 1947 the commission granted a schedule loss of 15 percent of left little finger, indicating that the finger was scarred and that there was a slight defect in flexion at the distal joint. The committee agreed that since the ruling of the commission had not been until March 20, 1947, the case probably should not be shown in the 1946 annual rates of the company. A second question had been raised since this company was in a contest running from July 1, 1946 to June 30, 1947. The Committee of Judges did not believe that they should be concerned with contests but did believe that if a report of the injuries was made up to include the figures from July 1946 to June 1947, that this case should be shown as a permanent partial disability due to the defect in flexion at the distal joint in any such report. In these two cases there was some discussion as to whether it could be considered that an employee had completely healed from an injury if there were a remaining loss of motion from the injury. In any case, the committee did not believe that the two above cases could be excluded from the rates because of paragraph 3.3.2(f) of the standard.

The same letter from this company had included a third case where an employee had dislocated his left shoulder on June 28, 1947, while installing a fuse under the dash of an automobile. The investigation had disclosed that at the time of employment the injured employee had a condition of his left shoulder such that any use of the arm in an awkward position caused the shoulder to slip out of position. After considerable discussion the committee agreed that this injury should be charged in the rates. They agreed that this might be considered as a rather severe ruling, but they believed that the employee working in this very awkward position had definitely aggravated a pre-existing condition.

CASE 31. A company had written concerning two injuries, one occurring on a parking lot and the other on the plant driveway. The question had been raised as to whether, because of 2.1.3 of the code, the injury in the driveway should be counted but the injury in the parking lot should be excluded. There had been some discussion concerning the interpretation of the last phrase of paragraph 2.1.3 which

was "or is under the direction of a supervisor." At the meeting of the Committee of Judges the Chairman reported that recently he had even gone out of his way to make a personal visit to the plant in order to see the relation of the parking lot to the driveway. So far as he could determine, the parking lot was merely an extension of the driveway. There was no clearcut distinction between the two and there would be, apparently, no distinction between supervision over the employees when in the driveway as compared to when in the parking lot. After further discussion, the committee agreed that both of these cases, one in the parking lot and one in the driveway, should be charged in the rates. They also recommended that the Z16 Committee give further consideration to the wording of paragraph 2.1.3 in order to clarify the last phrase.

CASE 32. A company cited the case of a girl in the packing department of their Canadian plant, who was packing boxes of cereal, when she twisted her hands and her left wrist became dislocated. This girl had suffered an injury when she was approximately 14 years old and since that time she had had a loose wrist joint which occasionally becomes dislocated, but was usually easy to reduce. However, on this particular occasion it had been necessary to hospitalize her. There was no unusual twisting or movements of the hands on this particular job and other girls did it regularly without any ill effects. Since this girl had a history of a previous injury which caused her wrist to slip out of joint, they were wondering whether this was a chargeable case.

The Committee of Judges ruled that the injury to this girl should be counted in the rates and the time charges should be the calendar days lost from work as the result of this injury. The Committee agreed that this was a rather close decision, but it believed that the injury had definitely aggravated a pre-existing physical weakness or condition.

CASE 33. A company reported the case of a female employee, who had a fainting spell from natural causes and her fellow-employee decided on her own accord that she should be given aromatic spirits of ammonia. This fellow-employee informed another employee to mix a dose of this aromatic. Upon the mixing of this formula, the employee thought it was to be used for smelling salts and therefore made a much stronger mix of ammonia than was necessary. This dose was given to the fainting employee and resulted in burns of the mouth and throat which caused one day's lost time. The question was whether or not the fact that the unnecessarily strong dose of spirits of ammonia, administered by an employee of the company on company premises, even though not on instruction of any supervisor, was sufficient to warrant a classification of this injury as an occupational injury under the code.

The Committee of Judges decided that this injury should be included in the rates and the time lost should be shown as one day. Their decision was based primarily upon the fact that the injury was the result of an act of a fellow employee in administering an improper dose of medicine.

CASE 34. A company reported two cases of heat exhaustion as follows: A male employee began at 8:00 A.M. to lecture to a

group sitting in a classroom; he was on a platform, with a portable microphone around his neck. Within a half hour of beginning his lecture, he began to feel "waves of weakness," and started for the outdoors, but collapsed before getting into the open air. When medical help arrived, he was lying on the sidewalk, with general symptoms which led to treatment for "heat exhaustion". The lecture-room had been checked and found to have a slightly higher temperature and relative humidity than the general prevailing atmosphere. The mean local temperature for the day was 77 F, with a high of 82 F at 11 o'clock. While the temperature was not taken in the lecture room on that day, it probably did not exceed 80 F at 8:30. The employee's record does not reveal any significant related condition. He is known to "pace" while lecturing and to perspire freely. The physician's diagnosis was "heat exhaustion."

In the second case, a female employee was escorted to Medical Station by co-worker. The employee complained of weakness and profuse perspiration, and was treated for "heat exhaustion." This employee works in the Blueprint Vault, where temperature is slightly higher than in surrounding areas, but where air movement is good. The mean local temperature for this area for the day was 78 F, with a high of 84 F at 3 P.M. While the temperature was not taken in the Vault on that day, it probably did not exceed 80 F. The employee had been under treatment for hypertension. The physician's diagnosis was "heat exhaustion."

The question in both cases was whether these cases were industrial, according to Section 2.6 of the American Standard Code, Z16.1-1945. The Committee of Judges decided that neither of these two cases should be included in the rates, that in view of the relatively moderate summer temperatures and the absence of any significant abnormality of temperature in the work place, or any significant excessive exertion, the Committee did not believe that the cases arose out of employment in accordance with the meaning of the code.

CASE 35. This concerned two cases. The first case was that of an employee who fell while walking in an aisle and struck a skid load of material. The employee injured his head, elbow, and knee. He did not lose any time from work but the knee developed a condition which later required surgery. The injured man left the employ of the company before undergoing the surgical operation on his knee but the company agreed that the surgery was necessary as a result of the injury and arranged for it at a later date. It was agreed that this injury should be counted as a temporary total disability and the days charged should be the days of disability resulting from the operation on the knee.

The second case reported was that of an employee who had been moving a platform skid by sliding it on end. His foot slipped on the oily floor. His legs spread apart and the skid began to fall. The employee exerted an effort in an attempt to regain control of the skid but slipped and fell with it. "The pain experienced did not appear unduly severe for such an occurrence and the employee did not report the incident at the time." Because the pain persisted, two days later he reported and an examination revealed a left inguinal hernia. There had been a difference of opinion as to whether or not this case sat-

isfied 2.2(c) of the code which stated that the pain must be so severe that the employee stops work. There was considerable discussion as to the amount of time that an employee would have to stop from work in order to fulfill this requirement. It was agreed that the only time that the employee must stop work to fulfill this requirement was enough to indicate the degree of pain and that this might be momentarily and not a matter of minutes or hours. From the description of this case, the Committee of Judges assumed that this employee must have stopped work momentarily because of the pain. They therefore voted that this case should be counted in the rates in accordance with the standard time charges for hernia.

In further discussing this case, the chairman called attention to the fact that he had recently heard of an employee who had had an injury which had been diagnosed as a hernia of the knee. There had been a rupture of some of the tissues at the knee and some of the fluid had come through this rupture. It was agreed by the Committee of Judges that paragraph 2.2 was concerned with hernias of the abdominal cavity and that in any revision of the code explanation should be given to clarify this point.

CASE 36. A company gave a complete description of an injury where a machinist got foreign bodies in the eye on Monday, October 20. This was immediately reported and medical attention provided, but the employee's eye continued to bother him, and on October 22 he was sent to an eye specialist who treated the eye for further foreign bodies and for infection. The employee was out of work on October 22 and 23 and on the morning of October 24 the eye specialist treated his eye and informed him that he could go back to work. The employee reported this to his foreman on the afternoon of October 24 but elected to remain out of work until Monday, October 27. The question raised was as to the correct time charge for this injury. There had been a difference of opinion as to whether the correct time charge was for October 22 and 23 or whether time should also be charged for October 24. Since the doctor had advised the employee that he could return to work and he had actually been in the plant during the afternoon of October 24, it was agreed that the employee had been able to return to work sometime during the shift on October 24 and therefore the correct time charge was for two days temporary total disability on October 22 and 23.

CASE 37. This was a case where an employee in the sanitation department had entered the packing department to talk with the foreman about union business. Upon leaving the department he stepped to one side permitting a pump truck to pass, at which time he slipped and fell resulting in fracture of the radius of left arm. The employee had not received permission from his own foreman to enter the packing department on union business. This was a violation of the articles of agreement with the union. It was admitted that this employee had committed this violation on previous occasions. The question was raised as to whether this injury arose out of and in the course of employment and whether it should be counted in the rates. In the discussion which followed it was considered that if the employee was talking to the foreman of the packing department

about employee-employer relations such as grievances or other matters of this nature, that such an act would be considered as to be within the definition of an act in the course of employment. On the other hand, if he was only concerned with some social function of the union such as the selling of lottery tickets or something which had nothing to do with the employer, then this employee might have taken himself out of his employment. From the case presented, the Committee of Judges assumed that the employee was talking about employee-employer relations and that he therefore was still within his employment. Since the report inferred that the company had not attempted to enforce the requirement that this employee obtain permission from his own foreman before going into the packing department, the Committee of Judges did not believe that this violation placed the employee outside of his employment. Under these circumstances the Committee of Judges voted that this case should be counted in the rates.

CASE 38. A company asked whether or not three cases should be counted as lost time accidents.

No. 1 was a detailed report of the activities of an employee who, with two other employees, helped to load a piece of conduit weighing 214 pounds onto a truck. Although this employee had felt a slight twinge, he had not felt pain and had said nothing to his two helpers, but the next day noticed a lump in the groin. This employee was operated on for hernia. The Committee of Judges decided that this case should not be counted in the rates.

No. 2 was an employee guarding the main gate of the plant. In opening the gate, the gate had stuck and the employee had pulled hard. This occurred at 9 o'clock and at 9:30 he reported at the dispensary and told of straining himself pulling the gate and said he had pains in his side. This resulted in a hernia. In the discussion it was admitted that there was hardly enough information in the report to show whether or not the pain had been sufficient for the employee to stop work until the pain subsided in accordance with paragraph 2.2(c). The Committee agreed that the employee had stopped work at 9:30 because of the pain and had reported to the dispensary and they therefore believed that this case should be counted in the rates.

No. 3 was a long and detailed report of an employee who had been engaged in cleaning out a tank which had previously contained benzol. It would appear from the report that the tank had been purged with steam and that the concentration of vapors had been tested and found to be within a safe limit. The employee had worked for only a short time in the tank and became ill. The company doctor had agreed that the case was puzzling but had diagnosed the cause as "inhalation of vapors with a predisposing physical condition." The employee had lost a total of 6 days. After reading the complete detailed report the Committee of Judges agreed that they were also puzzled as to how this injury occurred but believed that they would have to be governed by the diagnosis of the doctor that the injury was as the result of inhalation of vapors and they therefore believed that this case should be counted.

(Continued on page 68)

Up-To-Date Safety Requirements for *Wood Ladders*

New American Standard covers all types, sizes, and grades of commercial wood ladders in general use. Maximum fiber stresses for different types of wood helped determine the dimensions specified for each type of ladder. Committee asks for questions on interpretation of the standard, and suggestions for improvements

By H. D. Bender

A NEW edition of the safety code for ladders is now available as an American Standard. In revising the 1935 edition, one of the first problems taken up by the committee was to determine how the work could be carried out most effectively and expeditiously to eliminate ladder accidents. It was decided that this objective could be met to the best advantage in the new code by covering all types, sizes, and grades of commercial wood ladders for general use.

This new scope resulted in broader coverage for wood ladders than was provided in the previous codes. However, it also eliminated the requirements for fixed ladders, their accessories and installation, and the limited requirements for metal ladders previously included in the ladder codes. In the case of fixed ladders which form a part of a structure,

Mr Bender of the Bell Telephone Laboratories is chairman of the Sectional Committee on the Safety Code for Construction, Care, and Use of Ladders, A14.



safety standards are covered in the American Standard for Construction and Maintenance of Ladders and Stairs in Mines, M12.1-1946 and in the American Standard Safety Code for Building Construction, A10.2-1944. Metal ladders, and particularly the newer types made of light metals, are being developed quite actively at the present time. It is the recommendation of the present committee that safety standards for metal ladders be developed as an independent project when the need develops.

In preparing the new code, considerable effort was given to simplifying the requirements and their arrangement in the different sections so that cross-references would be reduced to a minimum. Furthermore, the design and construction requirements for all types of ladders are combined under different groups in one section so that any requirements for a particular type of ladder may be located easily and quickly.

New Group 2 Includes Douglas Fir and Southern Yellow Pine

Heretofore, the species of woods suitable for use in ladders were classified into four groups on the basis of their mechanical properties. This classification has been changed to five groups. The new Group 2 includes Douglas fir and southern yellow pine which are widely used in the manufacture of wood ladders. Maximum allowable fiber stresses for each group of woods are included in the present code for the first time. The specified stresses were used as a basis for determining the minimum dimensions specified in the code for each type of ladder and should be helpful in connection with any studies involving the strength and design of ladders, particularly for special service.

Standard Sizes of Lumber Stock Considered in Ladder Dimensions

Another important new feature is the correlation between the specified minimum dimensions for each type of ladder and the standard lumber dimensions for ladder stock. All minimum dimensions for ladders throughout the code are based on wood parts dressed from standard sizes of lumber stock. This brings the code requirements in agreement with the present practices in the manufacture of wood ladders by the ladder industry. This feature is desirable as it eliminates waste of material and pre-

On April 2, 1948 the American Standards Association approved the American Standard Safety Code for Wood Ladders, A14.1-1948. This is the third edition of the ladder safety code developed by the Sectional Committee on the Safety Code for Construction, Care, and Use of Ladders, A14, over the past 25 years. This work is carried on under the sponsorship of the American Society of Safety Engineers.

The original code was issued as a Tentative American Standard Safety Code for the Construction, Care and Use of Ladders in 1923 as Bulletin No. 351 of the United States Bureau of Labor Statistics. This code was drafted on the basis of establishing minimum specification requirements for all types of ladders used by industry, including a brief section on the care and use of ladders.

The experience gained under the code resulted in numerous suggestions for its improvement as a safety standard. The committee prepared a revised draft which was approved and issued in 1935 as an American Standard Safety Code. In this revision, no changes were made in the scope or sectional arrangement of the code. However, extensive additions and changes were incorporated in the text to bring the material requirements up to date, to substitute suitable performance standards for specific design and construction requirements, and to cover more fully the safe practices on the care and use of ladders.

Late in 1939, the committee considered further revisions to the ladder code but the work was interrupted by the war and was suspended for the duration. Following the war, the committee was reorganized to include 33 members and alternates representing 16 different organizations such as ladder manufacturers, lumber manufacturers, ladder users, engineering and safety societies, insurance interests, state regulatory commissions, and departments of the Federal Government.

mits producing and grading the materials for use in ladders on the most favorable basis.

The broad field of ladder usage is constantly expanding through the development of new uses as it is learned that makeshifts and substitutes for ladders do not pay. Some of these uses introduce problems with reference to the design or construction of ladders which may not be common to the uses of a general purpose ladder. It was not considered possible or necessary to cover all the modifications that might have merit from a safety standpoint under special conditions of use. The committee has, however, recognized the special purpose ladder and included requirements for a few kinds of ladders in rather common use. Other kinds of special purpose ladders are identified only.

In connection with the last section of the code on the care and use of ladders, the paragraph on the protective coating for ladders was revised to include painting of inspected ladders under the supervision of the ultimate purchaser. In other respects

this section was not materially changed.

This third edition of the American Standard safety code for ladders represents the integration of the broad experiences and viewpoints of the diversified interests concerned with safety in the construction, care, and use of wood ladders. It is the tool which should serve a useful purpose as the foundation for a coordinated accident prevention program through the intensified efforts of all interests associated with this particular problem.

It is the hope of the committee that it will become an effective instrument for prevention of ladder accidents through the widest possible use by all interested parties.

In order to secure uniform application of this code and a sound background for future revisions, the sectional committee will welcome questions on its interpretation, and constructive comments and suggestions regarding improvements in the requirements from any party interested in wood ladders.

NEMA Celebrates 40 Years of Standardization

THE National Electrical Manufacturers Association, one of the early members of the American Standards Association, celebrated in June the 40th anniversary of the foundation of the American Association of Electric Motor Manufacturers, one of its own founder societies. Following the organization of the motor manufacturers association in 1908, the standardization work in the electrical manufacturing industry, which included many other products in addition to electric motors, has been among the most constructive of the national standardization programs in any industry.

The importance of standardization began to be recognized in the early days of development of the electrical industry. In those days the supply of electrical energy was a costly and confusing undertaking, though the advantages of the utilization of this form of energy were rapidly becoming evident.

The first generating plants chose their own system characteristics. There were no standards of insulation for electrical apparatus; no standards of safety; no standard fuse sizes (either in physical dimensions or in ampere rating); no standard wire sizes; no standard wiring methods. Equipment had to be custom made.

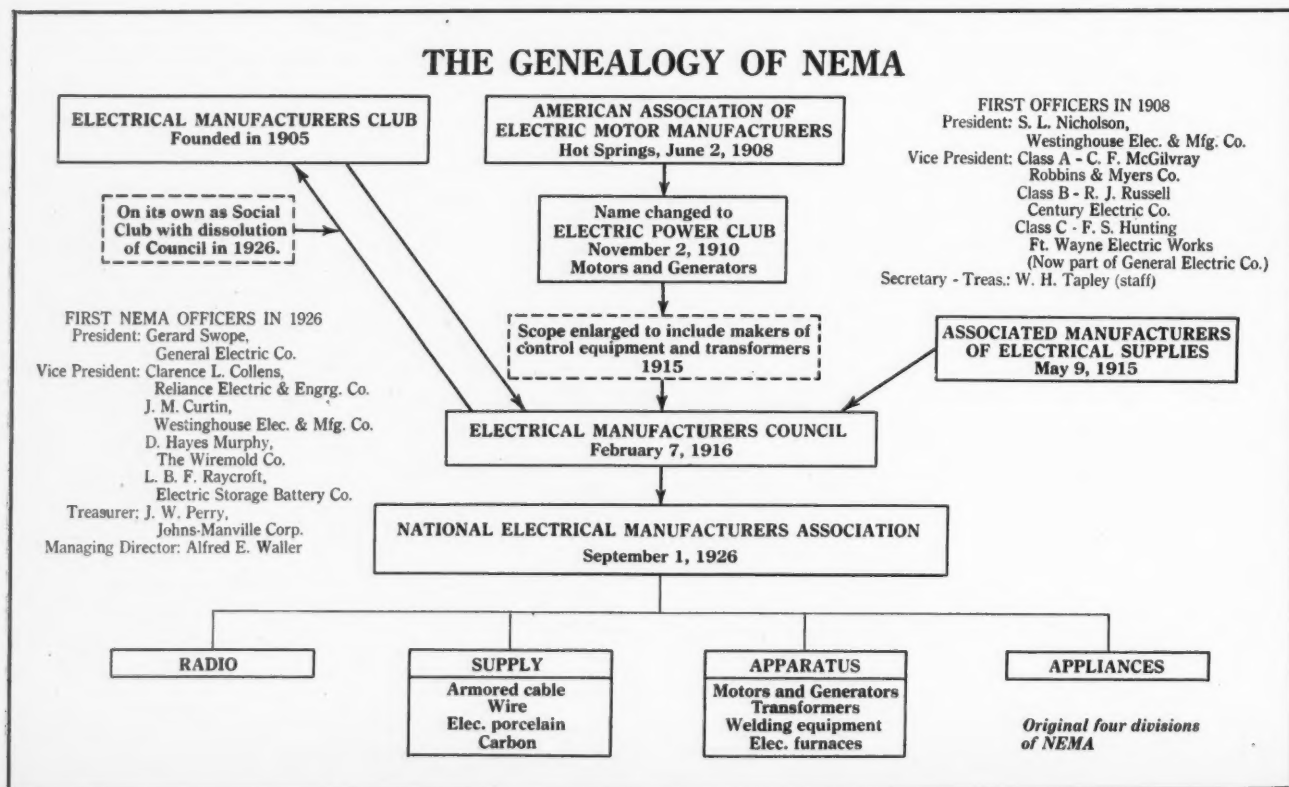
The American Institute of Electrical Engineers made its first report on standardization in 1899, an event which marks the start of standardization in the electrical industry. Even prior to this, there was a considerable amount of more or less tentative standardization work which was partially effective, although uncoded.

Soon after the initial standardization work of AIEE, certain of the larger manufacturers of electrical supplies began to recognize that standardization was essential to the future development of the industry and they attempted to establish a few voltage and frequency standards.

These efforts resulted in the formation of the Electrical Manufacturers Club in 1905, an organization having a somewhat limited membership, but it was soon apparent that the co-operation of manufacturers of all types of electrical apparatus was needed.

Thus, in 1908, the American Association of Electric Motor Manufacturers was organized "to bring about a better standardization in motors." This Association was succeeded by the Electric Power Club in 1910, which included generators as well as motors and in 1915 the scope of the organization was enlarged by the inclusion of industrial control equipment and transformers.

These two organizations, in conjunction with the Associated Manufacturers of Electrical Supplies, founded the Electrical Manufacturers Council in 1916 to coordinate the work of the two groups. The council functioned in this way until 1926



when it was dissolved and the National Electrical Manufacturers Association came into being.

As first organized, NEMA consisted of an apparatus division, a supply division, and a policy division. Shortly thereafter, a radio and an appliance division were added.

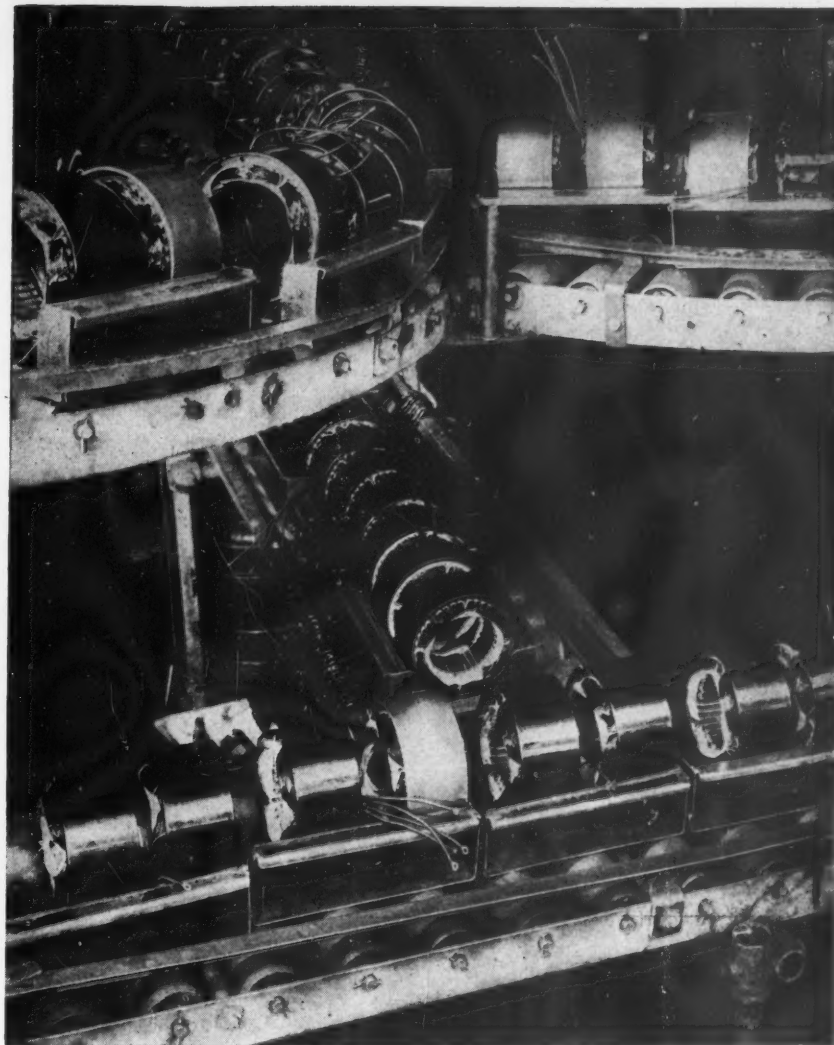
Today there are nine major product classifications: appliances, illuminating equipment, signalling and communication equipment, industrial apparatus, building equipment and supplies, insulating materials, wire and cable, generation, transmission and distribution apparatus, and miscellaneous equipment. The Motor and Generator Section is classified under the industrial apparatus division.

Development of Technical Standards One of Primary Functions

One of the primary functions of the American Association of Electric Motor Manufacturers and its successors, the Electric Power Club and the National Electrical Manufacturers Association, has always been the development of technical standards. In the case of the electric motors, this process has been continuous since the first AAEMM recommendations were formulated in 1908. Objectives once regarded as unattainable, such as the standardization of frame and mounting dimensions, have finally been achieved. Today NEMA motor and generator standards alone fill a 200-page book.

NEMA recognizes that certain standards for electrical products assume national significance and should be adopted as American Standards under the procedure of the American Standards Association. Therefore, NEMA is a Member-Body of the ASA and is represented on all ASA Boards and Committees that are in any way concerned with standards which affect electrical products. This frequently includes participation in projects for nonelectrical products, such as materials required in the construction of electrical parts. All electrical standards approved as American Standards under the ASA procedure have the approval of NEMA.

NEMA believes in the principle of the ASA procedure which provides for participation of all interested parties in the development of a standard. To assure adequate representation of all diversified manufacturing views, NEMA has a standing committee—the Codes and Standards



General Electric Co

Wound stators for fractional-horsepower motors are shown on conveyors in a big electrical manufacturing company. These motors will be used in vacuum cleaners, refrigerators, and many other household electrical appliances.

Committee—which designates the personnel of NEMA representation on outside standardization committees. Made up of twenty-four executive engineers, this committee meets approximately every six weeks. It is the responsibility of the committee to review all proposed standards for technical soundness and for harmony with general policies and purposes of NEMA, and to determine that the interests of all NEMA sections have been given consideration. NEMA counsel reviews these standards before they are approved by the Codes and Standards Committee for the Association as NEMA Standards.

One of the biggest assignments of the Codes and Standards Committee is the correlation of engineering activities. In promoting desirable standardization, the committee cooperates with such organizations as

the International Association of Electrical Inspectors, National Fire Protection Association, National Safety Council, and the American Society for Testing Materials. The Association works with various testing laboratories, assists governmental agencies in connection with the formulation of government specifications, and participates in the continuing development of the National Electrical Code.

NEMA member companies are under no obligation, expressed or implied, to manufacture equipment in conformity with NEMA Standards. Compliance with the standards is purely voluntary. The following is quoted from the By-Laws of the Association:

"Purpose of Standards. National Electrical Manufacturers Association Standards are adopted in the public

interest and are designed to eliminate misunderstanding between the manufacturer and the purchaser and to assist the purchaser in selecting and obtaining without delay the proper product for its particular need. Existence of a National Electrical Manufacturers Association Standard does not in any respect preclude any member or non-member from manufacturing or selling products not conforming to the standard."

20 Injury Rate Cases

(Continued from page 63)

CASE 39. This was a detailed report of an injury to an employee who received a fracture of one finger. There was no displacement or deformity and the employee lost no time from work. In the opinion of their doctor there was neither deformity, displacement, or loss of function as a result of this injury, but the Commission had made an award of \$250. The Judges decided that this case should be treated as a temporary partial disability and should not be counted as a lost time injury.

CASE 40. This was a case where an employee was voluntarily spending his lunch hour watching a new building construction upon company property. The construction was located some distance from the employee's actual point of work. Upon leaving the scene he slipped on a wet pavement where the wetness had been caused by the construction work and suffered a severe contusion of the shoulder. It was agreed that it would have been helpful if further information could have been obtained as to whether any barriers had been placed around the construction work. The Committee of Judges finally came to the conclusion that when this employee had gone over to the construction job to look at it during his lunch hour, that he had taken himself outside of his employment and that although he was still on company property, that this case should not be counted in the rates.

CASE 41. A company asked whether disability due to food poisoning should be counted where the company management owned and operated the cafeteria for the benefit of its employees. In this particular case some employees were required to work overtime. They were provided with a free meal by the company in the company cafeteria. This was a regular practice in connection with overtime work. In the case in question food was served which had been left over from noontime and not freshly cooked and several of the employees became ill with two or three being hospitalized. The question was whether or not the lost time should be counted in the rates. In the discussion of this case it was brought out that the decision hinged partly on the fact that the company was giving a free meal to employees in connection with their overtime work and that the cafeteria was owned and operated by the company. In this particular case it was voted that these injuries should be counted as industrial injuries.

Report Indicates German Standards Group Revived

A REPORT from the Austrian Standards Committee indicates that the German standardizing body has succeeded in calling together a few former workers and has reorganized some of its technical committees. The American Standards Association is, at the moment, trying to establish official contact with the group through the American Military Government.

According to *Die Onorm*, the bulletin of the Austrian Standards Committee, there were, at the beginning of 1945, about 8,000 German standards in circulation and several thousand engineers and technicians working on more than 300 technical committees. After the conclusion of hostilities, not more than half of all standards could be traced and only a few experienced standardization workers were alive. Disruption of postal and transportation services has greatly handicapped resumption of activities.

Standards Committee Under Authority of Allied Control Council

The reorganized standards committee exists, like everything else in Germany, under the authority of the Allied Control Council, says *Die Onorm*. According to rules established by the Council, the standards group will be headed by a "praesidium" or central administrative com-

mittee. This "praesidium" is composed of six delegates from each military zone, who represent principal branches of industry in each zone. The actual standardization work will be carried on in sectional committees where all interested parties (manufacturers, consumers, scientists, and government agencies) will be represented. The work of similar committees in different zones must, of course, be coordinated. *Die Onorm* reports that the standardizing organization is, today, the only group in Germany which is able to carry on its business all over Germany in spite of interzonal boundary lines. This is made possible because of the common technical and scientific work of the Allied Control Council.

Only Standards for Public Safety To Be Mandatory

One of the first tasks of the committee consists of a "general purge" of German standards by weeding out all standards which were imposed upon German industry either by military authorities or by some "party interests," the Austrian bulletin continues. Generally speaking, only standards and specifications having direct relation to public safety will become mandatory; otherwise, the old German practice of making all standards obligatory is now considered obsolete.

Existing local administrative regulations pertaining to such items as boilers, pressure vessels, and elevators will be revised in respective technical committees and made uniform for all military zones in Germany. A certain number of standards in the field of civil engineering have already been issued and intensive work is being carried on in various technical committees studying a great variety of building problems. Freight and passenger elevators are also being studied and old specifications are being revised, not only from the viewpoint of public safety, but also from the standpoint of unification of dimensions, motor-power, and speed. In addition to revision of many old and wartime standards for machine tools, some new projects have been initiated in this field.

States Adopt New Measures For Safety Glass in Vehicles

Kentucky's requirement of safety glass in common carriers and school buses has been extended to apply to all vehicles. After January 1, 1949, all new vehicles sold in the state must have safety glass wherever glass is used in doors, windows, or windshields.

New York has passed a law which requires replacement with safety glass of any glass so broken, fractured, or discolored as to distort visibility. Use of safety glass is now required in all replacement of glass in doors, windows, or windshields.

Standard Aircraft Materials Ease Supply Problems

AN improvement in the supply of raw materials obtained through warehouses has come from the compilation of a standard Warehouse Stock List for West Coast manufacturers and suppliers. Development of the list was undertaken as a project of the National Aircraft Standards Committee.

As a result of the project, the aircraft companies have agreed to eliminate many differences in choice of specifications, tempers, finishes, and sizes, and to specify materials from the Warehouse Stock List; the warehouses have agreed to keep a constant supply of these materials on hand.

So successful has this arrangement been, it is reported, that supply companies have been able to reduce the quantities and varieties of raw material items they must stock by 50 percent, while not materially reducing the value or weight of stock they keep on hand. The inventory of steel tubing suppliers revealed they carried a total of 2200 different items on their shelves. Some of these items had been stocked for several years without a single sale. Now, with the NASC Warehouse Stock List, they are able to carry as few as 217 steel tubing items and still meet requirements of the industry.

With the number of items to be stocked narrowed considerably, warehouses are able to order more intelligently from mills and to assume safer risks in maintaining large inventories of particular items.

List Permits Changes Before Drawings Are Released

The NASC, a unit of the Aircraft Industries Association, adopted the project in 1946 as the result of suggestions by Northrop Aircraft, Inc., that preparation and use of a standard stock list would permit aircraft companies to make deviations—or substitutions of material specifications—before the production drawings were released—not afterwards, when schedules are short.

Glen M. Aron, head of Northrop's standards department, was made chairman of the Warehouse Stock

List committee. With his committeemen, he enrolled West Coast manufacturers and warehouses in a move "to eliminate all possible buying differences and to maintain the preferred items in local stock."

Aircraft companies obtain raw materials from warehouses, rather than mills, because of limited contracts and the length of time required for mill shipments. Warehouses have always found maintenance of adequate stocks most difficult because of the differences in buying practice of the different aircraft companies. For instance, as many as eight different types of the same diameter and wall thickness steel tube might be required because of variations in alloy, heat treat, and finish. In the Warehouse Stock List, these variations already have been reduced to as few as two and, in some instances, to one.

Complete Inventories by Suppliers Gave Data for List

Preparation of the stock list has been a major task, but it already has shown results. As an example of the work required to prepare the list, steel tubing suppliers voluntarily made complete inventories of their stocks and sales. These inventories were used by the stock list committee in its final discussions on tubing standards.

The subcommittee has listed the four major aircraft raw materials—alloy steel, stainless steel, aluminum, and magnesium. Each list covers sheet, strip, plate, bar, and tube stock.

Duplications and near equivalents were eliminated by voluntary action of the two groups—buyers and sellers. The stock list committee expects to prepare copper and brass lists next.

With the "standard lists" prepared after months of voluntary effort, supply houses agreed to keep reasonable amounts of these preferred items on hand, aircraft engineering departments were asked to specify standard stocks wherever possible, and aircraft material departments began using the list in preparing materials manuals and establishing their individual factory stock lists.

Proof of the success of the plan is found in the comment of aircraft executives.

"We have found a noticeable improvement in the raw materials supply problem—particularly in the availability of steel—since the Warehouse Stock List was issued," declared J. V. Naish, Northrop factory manager. "There is still a lot of work to be done in applying standards to aircraft raw materials, but the efforts already expended in this direction are showing results. Procurement of raw materials for huge, complex airplanes like the Northrop Flying Wing YB-49 is always quite a problem, but the NASC program has helped considerably."

Another indication of its success is the recent phenomenon of eastern buyers, whose factories are much closer to raw material mills than the western manufacturers, placing orders with West Coast warehouses. One of the east coast naval aircraft bases reportedly is finding it can get immediate delivery of certain raw materials through West Coast supply houses.

The eastern division of the NASC is at present arranging to prepare a preferred list to serve the East and Middle West.

Taylor Is New President of IES

Lee E. Taylor of the Detroit Edison Company has been elected president of the Illuminating Engineering Society. His term commences October 1, 1948.

Other officers elected to serve with him are: A. H. Manwaring, Philadelphia Electrical and Manufacturing Company, general secretary; E. M. Strong, Cornell University, treasurer; Walter Sturrock, General Electric Company, Cleveland, vice-president. The two new directors elected are

Myrtle Fahsbender, Westinghouse Electric Corporation, Bloomfield, N. J., and Hoyt Steel, Benjamin Electric Manufacturing Company, Des Plaines, Ill.

A review of the significant lighting activities of the year will be presented at the National Technical Conference of the Society, scheduled for September 20 to 24 at the Hotel Statler in Boston. More than thirty subjects will be discussed at sessions of the conference.

— News in Brief —

Aircraft Standards—Aircraft Industries Association of America, Inc., reports the first meeting of a subcommittee to work on development of standard methods for analyzing propeller performance. A subcommittee of its Propeller Technical Committee is considering recommendations for initiation of projects to standardize propeller governor control requirements for turbo-prop engines and propeller electrical de-icer heaters and overload relays. Recommended revisions to the standard AN-P-30 on propeller packaging have been completed. Minimum performance and safety requirements for airline safety belts, developed in cooperation with the aircraft manufacturers, airline operators, belt manufacturers, and the Civil Aeronautics Authority have been published in NAS standard 802. . . . National Aircraft Standards Committee has announced two new standards of its Ground-to-Aircraft Servicing Series, suitable for international use. They are NAS 405 Receptacle-External Power Connection (d-c current) and NAS 406 Plug-External Power Connection (d-c current). . . . A joint Government-Industry Meeting, including representatives of the Services, bolt manufacturers, and the National Aircraft Standards Committee, has agreed on changes in aircraft bolt specification AN-B-3 and AN 3-20 series drawings, for a revision to be completed soon.

Materials—Tests conducted by Underwriters' Laboratories, Inc., in cooperation with the Oil Heat Institute of America, the Aluminum Association, and several tank manufacturers, to determine whether aluminum tanks could be constructed which would comply with the strength requirements for steel tanks, have indicated that acceptable tanks can be made from aluminum. . . . The Federal Wool Advisory Committee, in reviewing the Research and Marketing Act program, has suggested the preparation of standards for wool from other countries and representative samples of such wool as an aid to customs officials in specifying duty assessments. . . . How the Control Chart Method of Analyzing Data, Z1.3-1942, is used in eliminating variations in the carding and spinning of yarns and thus reducing variations in the finished textile product is de-

scribed in an article in *Textile World*, March, 1948, "Quality Control Charts Aid Carding and Spinning," by Audree D. Anthony and R. Hobart Souther. . . . The United States Testing Company, Inc., announces completion of plans for enlarging the research facilities of the company. Seven planning boards, each designed for different branches of industry, have been established in the Research Division. The planning boards—engineering, chemicals, plastics, textiles, foodstuffs, leather, and consumer activity—are arranged so that each can bring the facilities of the integrated laboratories to bear on any problem.

Terminology—The Federal Trade Commission has held a conference to consider trade practices regarding the use of the word "gauge" as applied to hosiery, particularly women's circular-knit, or seamless, full-length hosiery and full-fashioned full-length hosiery. . . . A report covering a glossary of technical terms and words used in connection with marketing is being prepared by the American Marketing Association.

Measurement—Representatives of underwear mills attending a conference sponsored by the Underwear Institute showed interest in a proposal to size infants' and children's apparel on body measurements rather than by ages as has been the practice for many years. . . . An article entitled "Gage Zone System Harmonizes Delivery and Acceptance Inspection," by John Gaillard, mechanical engineer on the ASA staff, was published in the February 12, 1948 issue of *American Machinist*. This article presents a proposal intended to insure that component parts accepted by the gages used by the supplier for final inspection (delivery inspection) will always pass inspection when checked with the gages used by the purchaser for "acceptance inspection."

People—Rudolf F. Gagg, formerly assistant to the general manager of Wright Aeronautical Corporation, has been elected president of Air Associates, Inc. He is chairman of the ASA Sectional Committee on Standardization of Classification and Designation of Surface Qualities, B46.

. . . Manfred Bowditch, formerly field director of the Saranac Laboratory and former director of the Division of Occupational Hygiene of the Department of Labor and Industries of the Commonwealth of Massachusetts, has been appointed Director of Health and Safety of the Lead Industries Association. Mr Bowditch is a member of the ASA Committee on Allowable Concentrations of Toxic Dusts and Gases. . . . Robert A. Seidel, chairman of the ASA's Consumer Goods Committee, has been elected chairman of the Executive Committee of the National Retail Dry Goods Association for 1948. Mr Seidel is vice-president and controller of the W. T. Grant Company.

Clothing—Among the recommended Commercial Standards being circulated by the National Bureau of Standards to the industries concerned for comment is one for men's circular flat and rib knit rayon underwear, sponsored by the Underwear Institute. It covers men's rayon track pants, knitted athletic shirts, knitted polo shirts, and men's ribbed and flat knit athletic union suits. Other Commercial Standards on lengths of athletic, crew, and slack socks have been agreed upon by the Men's Hosiery Advisory Committee of the National Association of Hosiery Manufacturers. They prescribe a uniform method for measuring hosiery, as well as lengths and tolerances.

Safety—A paper presented before the 54th annual meeting of the American Society of Heating and Ventilating Engineers in New York in February revealed that legal requirements in regard to factory ventilation vary sharply from state to state. The analysis showed that 11 states have no codes at all and a majority of states have codes which are inadequate or impractical. . . . Traffic signs which conform to the uniform standards used on public highways are urged for industrial premises in a recent issue of the monthly newsletter published by the American Society of Safety Engineers. The provision of these traffic signs and signals should make it easier to get observance by the operators of trucks and other motor vehicles on the driveways of the industrial plant premises.

Books Relating to Standardization

The ABC of Modular Masonry. Second Architectural Edition (Structural Clay Products Institute, 1756 K Street, N.W., Washington 6, D.C.)

An excellent booklet on modular design—its objective, purpose, history, development, and advantages—has been prepared by the Structural Clay Products Institute. Particularly important is a chapter on brick and tile sizes, complete with drawings and charts. A question and answer section at the end of the pamphlet has been written by M. W. Adams, manager of the Modular Service Association and secretary of ASA Committee A62 on the Coordination of Dimensions of Building Materials and Equipment, in further explanation of the plan.

Accident Prevention Administration. By Frederick G. Lippert (McGraw-Hill Book Company, Inc., 330 West 42 Street, New York, N. Y., \$2.25)

One of the McGraw-Hill Industrial Organization and Management Series, this book contains an outline of the principles, procedures, and operating techniques for an effective accident prevention program. Included are such details as collection and evaluation of accident data, inspection and correction, union participation. Training and follow-up are stressed.

Index to 1947 ASTM Standards (American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pennsylvania)

This revision, issued in May 1948, is an adjunct to the 1946 Book of Standards and the 1947 Supplements. With the Index, any of the 1500 standard specifications and tests in the volumes may be located readily. In addition, it is of service to those who wish to determine whether ASTM has issued standard specifications, test methods, or definitions covering a particular engineering material or subject. All items are listed in the Index under appropriate key-words according to the particular subjects they cover. As a convenience, a list is given of the specifications and tests in numeric sequence of their serial designations.

Industrial Health Engineering. By Allen D. Brandt (John Wiley and Sons, Inc., New York, N.Y., \$6.00)

One of the best comments that can be made about Dr Brandt's book appears in his own words in the third chapter, "... the principles involved and the bases for adequate design are so badly understood that an unbelievably large percentage of the installations made in recent years are unsatisfactory or inefficient."

Industry is becoming more and more conscious and is doing more about the conditions and atmospheres in which its workers carry out their functions. This is necessarily so because there are constantly being added new and dangerous substances.

This book goes far in supplying a combination textbook and manual in which present knowledge in the field of control-

ling industrial contaminants is consolidated. It is timely, for many new problems in the detection and control of hazards already call for new work, new methods, and techniques by industrial hygienists. The knowledge and principles in the more familiar fields ought to be consolidated first.

Through seventeen chapters replete with practical suggestions, sketches, photographs, tables, and formulae, Dr Brandt gives specific recommendations, which obviously come from his own wide experience. This information will be valuable to anyone who has occasion to use the book, and necessary for those operating in the field of industrial hygiene.—D. F. Hayes

Industrial Management. 4th Edition. By Richard H. Lansburgh and William R. Spiegel (John Wiley & Sons, Inc., 440 Fourth Avenue, New York 16, N. Y., \$5.00)

The basic arrangement and practical approach of what has become a standard work in the field of industrial management since the late Professor Lansburgh wrote the first edition in 1923 has been retained in this fourth edition prepared entirely by Professor Spiegel. At the same time, cover-to-cover revision has been achieved and full treatment has been given to all of the most recent management developments. In addition, the present edition con-

tains a new chapter on maintenance and more than 125 new illustrations.

Steam Jet Ejector and Vacuum Cooling Section Standards (Heat Exchange Institute, 90 West Street, New York 6, N. Y., \$1.00)

This second edition of HEI Standards consists of the following three parts bound in one book:

Part I Steam Jet Ejectors

Part II Test Code for Steam Jet Ejectors

Part III Steam Jet Vacuum Refrigeration Equipment

Part I contains up-to-date recommendations on nomenclature, operating principles, types of assemblies, capacity, standard accessories and materials of construction.

The Test Code for Steam Jet Ejectors, Part II, has been revised, and contains steam flow curves based on the latest available data; a revised critical pressure ratio curve; recommendations covering measurement of motive steam, condensing water, pressure, and capacity; information on performance tests; revised illustrations of HEI standard flow nozzles; official HEI air orifice capacities; revised diagrammatic arrangements of apparatus for conducting various tests; and air water vapor mixture data.

Part III, Steam Jet Vacuum Refrigeration Equipment, contains recommended definitions, nomenclature, performance, construction, standard units, and special types.

Other Books for a Standards Library

ASTM Manual of Engine Test Methods for Rating Fuels (American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pennsylvania, \$8.00)

ASTM Standards on Cement (With Related Information) (American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pennsylvania, \$2.00)

ASTM Standards on Paint, Varnish, Lacquer, and Related Products (American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pennsylvania, \$4.35)

ASTM Standards on Rubber Products (With Related Information) (American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pennsylvania, \$4.00)

ASTM Standards on Soaps and other Detergents (With Extensive Bibliography on Metal Cleaning) (American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pennsylvania, \$2.00)

Directory of Commercial and College Laboratories (NBS Miscellaneous Publication M187, Superintendent of Documents, Washington 25, D. C., 30¢)

IES Lighting Handbook (Illuminating Engineering Society, 51 Madison Avenue, New York 10, \$7.50)

List of Electrical Equipment Approved by Canadian Standards Association Approvals Division. Second Edition (Canadian Standards Association, 10 Murray Street, Toronto, Ontario, Canada)

National Fire Codes. Volume 1: Flammable Liquids, Gases, Chemicals, and Explosives (National Fire Protection Association, 60 Batterymarch Street, Boston 10, Massachusetts, \$4.00)

Standard Rules for Field Welding of Steel Storage Tanks (American Welding Society, 33 West 39th Street, New York 18, 50¢)

Symposium on Load Tests of Bearing Capacity of Soils (American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pennsylvania, \$3.00)

Symposium on Paint and Paint Materials (American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pennsylvania, \$2.00)

Symposium on Rubber Testing (American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pennsylvania, \$2.00)

Tables of the Bessel Functions—Applied Mathematics, Series 1 (Superintendent of Documents, Government Printing Office, Washington 25, D. C., 35¢)

The ISO Council Meeting

Report by Vice Admiral G. F. Hussey, Jr.

*Delegate of the American Standards Association to the Meeting
at Geneva, Switzerland, May 31 to June 2*

THE second annual meeting of the Council of the International Organization for Standardization was held at Geneva, Switzerland, from May 31 to June 2, 1948, with Howard Coonley, president of the ISO and chairman of the Executive Committee of the ASA, presiding.

The nations which are Council members were represented as follows:

Belgium	G. L. Gerard, Vice-President
Brazil	Trajano Reis
France	General P. Salmon
	R. Tavernier
	J. Birlé
India	Dr L. C. Verman
Norway	K. Heiberg
Switzerland	F. Streiff, Treasurer
	W. Kuert
United Kingdom	P. Good
	Miss G. Harrison
United States	Howard Coonley, President
	Vice Admiral G. F. Hussey, Jr.
Australia	Represented by United Kingdom Delegates
USSR	Unable to attend because of illness of senior delegate
China	Not represented

The report of the General Secretary indicated that Henry St Leger, who assumed that position last October, has his organization on a firm and smooth-working basis. The data for the agenda were well prepared, and the minutes of each day's activities were briefed and ready on the delegates' desks at the next day's meeting.

The ISO headquarters are temporarily in a small villa in Geneva, which has been altered to accommodate the offices. It had been anticipated that a new building would be started by this time, adjacent to the present quarters, but no steps toward actual construction have been taken. In the meantime, the present quarters are adequate.

The General Secretariat has established close working relations with the International Labor Organization (ILO), also located in Geneva, and



Headquarters for the International Organization for Standardization are temporarily located in a small villa in Geneva, Switzerland. The present building occupied by the organization is shown above.

with the International Civil Aviation Organization (ICAO), which was holding a General Assembly at the same time as the ISO Council Meeting. Representatives of both these organizations attended some of the sessions of the ISO Council.

Mexico Nominated for Vacancy in Council

Mr Gerard, president of the Institut Belge de Normalisation, was re-elected vice-president. The two-year membership of Brazil on the Council having expired, Mexico was nominated to the vacancy thus created. Election by letter ballot of member-bodies will follow the circulation of the nomination, together with suggestions for additional nominations if desired by any members.

The proposal submitted by the Standards Organization of Palestine for publication of an ISO periodical

was tabled for consideration at a subsequent Council meeting.

At the suggestion of Mr Heiberg, the delegate from Norway, who spoke for all Scandinavian countries, the Council adopted a proposal that each member-body, on establishing a standard, should furnish the General Secretary with a card giving the title and a brief description of the standard in its language of origin, and in at least one of the three official languages, English, French, or Russian, if none of these is the language of origin. Further, the card should include the numerical designation assigned by the originator, and the UDC (Universal Decimal Classification) number. The General Secretary will be responsible for providing to each member-body cards containing the above data in the language of origin and in all three official languages in sufficient quantity to allow filing on any desired basis.

Numerous recommendations have been made for amendments to the Constitution and Rules of Procedure of the ISO. A committee was appointed, consisting of Mr Hebblewhite of Australia, General Salmon of France, Dr Verman of India, Mr Heiberg of Norway, and Vice Admiral Hussey of the USA, to consider all proposals already submitted and any others received during the year, and to report to the General Assembly which will be held in Paris in June 1949.

Steps to organize the international standardization work on textile test methods were taken at the meeting of Technical Committee 38 on Textiles of the International Organization for Standardization, held in Buxton, England, from June 7 through 12.

The report of the meeting will be published next month after the return to this country of D. E. Douty, Chairman of the Board of the United States Testing Company, who served as chairman of the U. S. delegation. Mr Douty was designated to attend the meeting by the American Council of Commercial Laboratories, National Federation of Textiles, Inc, and the New York Board of Trade.

News of ISO Projects

Photography—

The American Standards Association, as secretariat for the international standardization work on photography, ISO 42, has transmitted copies of eleven American Standards prepared by sectional committee Z38 to the central office of the International Organization for Standardization for circulation to the member countries of this international project for their comment. These standards are proposed as the basis for international agreement. The countries which have expressed their desire to participate in this work are: Austria, Belgium, Czechoslovakia, France, Italy, Netherlands, Russia, and the United Kingdom.

Chemistry—

Italy has accepted the secretariat for the international project on chemistry and proposes the following scope:

"To standardize terminology and graphical symbols used in chemical engineering, dimensions and other characteristics of industrial chemical equipment, chemical laboratory equipment, chemical analytical and test methods, and, where practicable, to effect standardization in certain industrial chemical processes and in mining, electrochemical work, and electric furnaces."

The American Standards Association, having been requested to participate in the work, is canvassing members of the ASA Standards Council, Board of Examination, Member-Bodies, and Associate Members for suggestions and comments. Due to the breadth of the proposed scope, it was thought best to limit this first circulation to members of ASA. The replies received will be considered by the Board of Examination in determining whether it will be necessary to ask the secretariat country for further information in regard to the scope.

Propose New IEC Committee to Study Electric Lamps

The British National Committee of the International Electrotechnical Commission has proposed to the Council of the IEC that an Advisory Committee on Electric Lamps be set up to consider whether agreement can be reached on the details of a specification for electric lamps, including the standard ratings adopted for various classes of lamps. The British National Committee has expressed its willingness to act as secretariat for this new committee if invited to do so by the Council.

This proposal has been placed before the several National Committees by the Administrative Secretary of the IEC to determine their views.

Size Differences Cause Trouble In Sending Shoes to Europe

With so many Americans sending shoes to friends and relatives in Europe, the problem of designating sizes is causing much confusion. Robert B. Hobbs, in an article now being circulated by the National Bureau of Standards,¹ writes that the British system of size designation compares more closely with the American than does the "continental," also known as the "European," or "French," system.

Great Britain uses for women's and children's shoes a system differing from the American system only in that the figure $1\frac{1}{2}$ should be added to the British size designation to get the corresponding American size designation. The series of numbers used is the same, and the size increments are the same in both. For men's shoes it may be necessary to add the figure $\frac{1}{2}$ to the British men's

size designation to get the corresponding American size.

In the European system, says Mr Hobbs, the sizes are based on centimeters (2.54 centimeters equal one inch) of length, a difference of one size corresponding to a difference of $\frac{2}{3}$ of a centimeter in length.

In regard to shoe widths, narrow sizes, corresponding to American widths AAAA to B, are not common in Europe, continues Mr Hobbs. The widths of women's shoes in most countries are designated either "narrow," which is approximately American width C, or "wide," which would be American width D. Men's shoes are similarly classified as "narrow," corresponding to American width D, "medium" (or sometimes "wide"), about like American width E, and "wide" (or sometimes "extra wide"), which corresponds to American width EE.

Chinese Magazine Publishes Table of Contents in English

Beginning with issue Number 7 of its magazine, *Standardization*, the Chinese National Bureau of Standards has made provision for the publication of the Table of Contents in English. While the magazine itself will still be printed in Chinese, this English Table of Contents is intended to help those who, though not familiar with the Chinese language, are interested in having an understanding of the general trend of standardization activity in China. The magazine contains information of local interest, news from overseas, and various government regulations and ordinances. The most recent issue received by the ASA contains articles on reasons for putting standardization into effect, preferred numbers, statistical methods of quality control, and standardization of domestic goods, among others.

¹ *European Footwear Sizes*, NBS Letter Circular LC899, April 28, 1948.

Standardization in the USSR

By D. Goliaev

*Vice-President of the
All-Union Standards Committee
of the Council of Ministers of the USSR*

STANDARDIZATION in the USSR receives a great deal of attention and is regarded as a Government function.

As part of the Government's planning of the manufacture and distribution of industrial and agricultural products, standardization becomes an important factor for rationalization and development of the national economy and for guaranteeing good quality of production.

The highest government standardizing body in the USSR is the All-Union Standards Committee. This committee is under the jurisdiction of the Council of Ministers of the USSR. Its task consists of preparation and approval of All-Union Government Standards (GOST) which are mandatory for all branches of the national economy of the USSR, throughout the whole territory of the Soviet Union. In addition to these All-Union standards, there are standards and technical specifications of local, departmental, or even factory application and significance. These are obligatory only in the territory of the member-republic which publishes them, or within the jurisdiction of a government department or a factory whose management approves them.

Preparatory work on all drafts of All-Union Government Standards is done by the technical bureaus of various ministries and government departments. These bureaus arrange with various scientific research laboratories, institutions, and organizations to make the studies and carry on the research required in the preparation of a draft standard. Certain ministries have their own central engineering bureaus carrying on standardization work.

All work in connection with the drafts of All-Union Government Standards is done in accordance with a single basic plan which is approved each year by the government.

Each prepared draft goes through

This article was prepared especially for INDUSTRIAL STANDARDIZATION by Mr Goliaev, representative of the USSR at the first meeting of the International Organization for Standardization. It shows how standardization, carried on under a government-controlled system, is under the direction of one of the high governing councils and is mandatory in all branches of the national economy.

the following steps: The first draft is discussed at the meeting of the scientific and technical council of that institution or factory which has originated the draft. After approval by this technical council, the draft is circulated among the interested organizations either producing or using the product covered by the draft.

This first draft is also circulated among individual specialists in the field related to the subject of the draft.

After all answers are received, the draft is revised by the technical committee for consideration by the respective ministry.

Subsequently, the Minister presents the final draft to the All-Union Standards Committee for approval.

The draft received by the All-Union Standards Committee is again studied and examined to check on the thoroughness of the study and on all the technical and economic factors involved. When necessary, the Standards Committee sets up special commissions of experts in respective branches of the national economy of the USSR. The final revised draft of the proposed standard is submitted

for the consideration of the members of the Standards Committee.

The Committee, after approving a standard, fixes the date when it is to become mandatory. In certain cases standards are approved only as recommended specifications and for a limited period of time; this is done when it is necessary to test the standard in practice and to collect factual material.

All-Union Government Standards of exceptional importance are submitted for approval to the Council of Ministers, after being given a preliminary examination by the Standards Committee.

The All-Union Standards Committee consists of a president, vice-presidents, and members appointed by the Council of Ministers of the USSR.

The Standards Committee has 15 industry branch committees. About 100 senior engineers, specialists in these various branches of industry, constitute their permanent staff. The Standards Committee also has a technical organ coordinating the work of the various industry committees and of scientific research institutions. This Coordinating Technical Organ also studies foreign standards from the viewpoint of their usefulness in connection with Russian Standards and is responsible for carrying on the relations with the International Organization for Standardization as well as with other national standardizing bodies.

Scientific Technical Library Contains Russian, Foreign Standards

There also is a special section for technical documents and registration of standards. The Standards Committee has a scientific technical library of all the Union's Standards as well as foreign standards and specifications.

The Standards Committee is empowered by the government to commission various ministries with the preparation of draft standards and with special studies in the field of standardization. It also has the right to demand from ministries all necessary materials and information and to draft for experimental work various institutions and laboratories of the Academy of Science of the USSR and of ministries.

Funds for the Standards Committee are provided by the Government in its All-Union budget.

Expenses incurred in the preparation of All-Union Standards by any ministry or department are included in the computation of the production costs of the product for which the standard was prepared.

Only the All-Union Standards Committee has the right to publish government All-Union Standards. The committee operates a special publishing office, "Standartgiz," which also takes care of distribution of standards.

In the course of the last 20 years, standardization of many products in the USSR has achieved a notable success. At the present time there are over 7500 active government All-Union Standards in the Soviet Union, without counting several thousands of departmental technical specifications or "norms."

Standardization Used to Solve Problems in National Economy

Standardization in the Soviet Union is carried on not for the sake of standardizing but as a means of solving problems arising in the national economy. The standard is not only a technical but also an economic factor and it carries a great responsibility.

The Soviet Government demands that each plant must deliver its products not only in quantity prescribed by an approved plan, but that these products must be manufactured according to approved standards and technical specifications. Soviet law provides penalties for delivery of defective products and for not complying with standards.

In this respect the organizations which are preparing standards are obliged to make a thorough analysis of all pertinent technical and economic factors of production in order to be able to establish the most rational and correct standards.

Szczekowski

Announcement concerning the passing of Cz. Szczekowski, secretary general of the Polish Standards Committee, has come from the Geneva office of the International Organization for Standardization.

J. Oderfeld, a member of the editing committee, is the new secretary general.

ASA Standards Activities

American Standards Approved Since May 1, 1948

Portland Cement, A1—
Specifications for Masonry Cement, ASTM C91-44T; ASA A1.3-1948
Method of Test for Compressive Strength of Hydraulic-Cement Mortars, ASTM C109-47; ASA A1.4-1948
Method of Chemical Analysis of Portland Cement, ASTM C114-47; ASA A1.5-1948
Method of Chemical Analysis of Portland Cement, ASTM C114-46T; ASA A1.6-1948
Method of Test for Fineness of Portland Cement by the Turbidimeter, ASTM C115-42; ASA A1.7-1948
Method of Test for Autoclave Expansion of Portland Cement, ASTM C151-43; ASA A1.8-1948
Method of Sampling Hydraulic Cement, ASTM C183-46; ASA A1.2-1948
Method of Test for Air Content of Portland Cement Mortar, ASTM C185-47T; ASA A1.9-1948
Method of Test for Heat of Hydration of Portland Cement, ASTM C186-47; ASA A1.10-1948
Method of Test for Normal Consistency of Hydraulic Cement, ASTM C187-44; ASA A1.11-1948
Method of Test for Specific Gravity of Hydraulic Cement, ASTM C188-44; ASA A1.12-1948
Method of Test for Soundness of Hydraulic Cement over Boiling Water (Pat Test), ASTM C189-44; ASA A1.13-1948
Method of Test for Tensile Strength of Hydraulic Cement Mortars, ASTM C190-44; ASA A1.14-1948
Method of Test for Time of Setting of Hydraulic-Cement by the Vicat or Gillmore Needles, ASTM C191-44; ASA A1.15-1948

Sponsor: American Society for Testing Materials

Method of Test for Impact Resistance of Plastics and Electrical Insulating Mate-

rial, ASTM D256-47; ASA C59.11-1948 (Revision of ASTM D256-43T; ASA C59.11-1944)

Sponsor: American Society for Testing Materials

Transformers, Regulators, and Reactors, C57—

Terminology for Transformers, Regulators, and Reactors, C57.10-1948

General Requirements for Transformers, Regulators, and Reactors, C57.11-1948

Distribution, Power and Regulating Transformers, and Reactors, other than current-limiting reactors, C57.12-1948

Instrument Transformers, C57.13-1948

Constant-Current Transformers of the Moving-Coil Type, C57.14-1948

Step-Voltage and Induction-Voltage Regulators, C57.15-1948

Current-Limiting Reactors, C57.16-1948

General-Purpose Specialty Transformers, C57.17-1948

Rectifier Transformer Equipment, C57.18-1948

Test Code for Distribution, Power and Regulating Transformers, C57.22-1948

Test Code for Instrument Transformers, C57.23-1948

Test Code for Rectifier Transformer Equipment, C57.28-1948

Guide for Operation of Transformers, Regulators, and Reactors at Altitudes Greater than 3300 Feet (1000 Meters), C57.31-1948

Guide for Loading Oil-Immersed Distribution and Power Transformers, C57.32-1948

Guide for Loading and Operation of Instrument Transformers, C57.33-1948

Guide for Loading Pole-Type Constant-Current Transformers, C57.34-1948

Guide for Loading Step-Voltage and Induction-Voltage Regulators, C57.35-1948

Guide for Loading Current-Limiting Reactors, C57.36-1948

Sponsor: Electrical Standards Committee

Manual on Uniform Traffic Control Devices, D6.1-1948 (Revision of D6-1935)

Sponsors: American Association of State and Highway Officials; Institute of Traffic Engineers; National Conference on Street and Highway Safety

Petroleum Products and Lubricants, Z11—
Knock Characteristics of Motor Fuels, ASTM D357-47; ASA Z11.37-1948 (Revision of ASTM D357-46; ASA Z11.37-1947)

Analysis of Grease, ASTM D128-47; ASA Z11.16-1948 (Revision of ASTM D128-40; ASA Z11.16-1940)

Oil Content of Paraffin Wax, ASTM D721-47; ASA Z11.52-1948 (Revision of ASTM D721-44; ASA Z11.52-1944)

Cloud and Pour Points, ASTM D97-47; ASA Z11.5-1948 (Revision of ASTM D97-39; ASA Z11.5-1939)

Definitions and Terms Relating to Petroleum, ASTM D288-47; ASA Z11.28-1948 (Revision of ASTM D288-38; ASA Z11.28-1939)

Sponsor: American Society for Testing Materials

Lhoste of AFNOR

Ernest Lhoste, director general of the Association Francaise de Normalisation (AFNOR), passed away in March.

Mr Lhoste was an active figure in the field of international standardization. Within his own country, he was decorated several times—the Croix de Guerre and the Legion d'Honneur, among his outstanding awards.

He had been a member of the Permanent Standardization Commission (CPS) and the Superior Commission of Standardization (CSNOR) before becoming director general of AFNOR.

Photographic Thermometers, Z38.8.11-1948
Photographic Graduates, Z38.8.12-1948

Method for Predicting the Permanency of the Silver Images of Processed Films, Plates, and Papers, Z38.8.17-1948

Chromium-Plated Surfaces for Ferrotyping, Z38.8.18-1948

Sponsor: Optical Society of America

Cast-Iron Flanges and Flanged Fittings for Refrigerant Piping, B16.16-1948

Sponsors: American Society for Testing Materials; Heating, Piping and Air Conditioning Contractors National Association; Manufacturers Standardization Society of the Valve and Fittings Industry

Standards Being Considered for Approval

By the Standards Council—

Road and Paving Materials, A37—

Specifications for Paving Brick, ASTM C7-42; AASHTO: M-40-42 and T31-42; ASA A37.15

Method of Test for Unit Weight of Aggregate, ASTM C29-42; AASHTO: T19-45; ASA A37.16

Method of Making and Curing Concrete Compression and Flexure Test Specimens in the Field, ASTM C31-44; AASHTO: T23-45; ASA A37.17

Method of Test for Compressive Strength of Molded Concrete Cylinders, ASTM C39-44; AASHTO: T22-45; ASA A37.18

Method of Test for Organic Impurities in Sands for Concrete, ASTM C40-33; AASHTO: T21-42; ASA A37.19

Method of Securing, Preparing, and Testing Specimens from Hardened Concrete for Compressive and Flexural Strengths, ASTM C42-44; AASHTO: T24-45; ASA A37.20

Method of Test for Surface Moisture in Fine Aggregate, ASTM C70-47; ASA A37.21

Method of Test for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading), ASTM C78-44; AASHTO: T97-45; ASA A37.22

Method of Test for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate, ASTM C88-46T; AASHTO: T104-46; ASA A37.23

Method of Test for Compressive Strength of Concrete Using Portions of Beams Broken in Flexure (Modified Cube Method), ASTM C116-44; ASA A37.24

Method of Test for Coal and Lignite in Sand, ASTM C123-44; AASHTO: T113-45; ASA A37.25

Method of Test for Flow of Portland-Cement Concrete by Use of the Flow Table, ASTM C124-39; AASHTO: T120-42; ASA A37.26

Method of Test for Weight per Cubic Foot, Yield, and Air Content (Gravimetric) of Concrete, ASTM C138-44; AASHTO: T121-45; ASA A37.27

Method of Test for Clay Lumps in Aggregates, ASTM C142-39; AASHTO: T112-42; ASA A37.28

Method of Slump Test for Consistency of Portland-Cement Concrete, ASTM C143-39; AASHTO: T119-42; ASA A37.29

Method of Sampling Fresh Concrete, ASTM C172-44; ASA A37.30

Method of Measuring Length of Drilled Concrete Cores, ASTM C174-44; ASA A37.31

Method of Test for Loss on Heating of Oil and Asphaltic Compounds, ASTM D6-39T; AASHTO: T47-42; ASA A37.32

Definition of Terms Relating to Materials for Roads and Pavements, ASTM D8-46; ASA A37.33

Specifications for Materials for Sand-Cement Bed for Brick and Block Pavements, ASTM D58-37; ASA A37.34

Specifications for Granite Block for Pavements, ASTM D59-39; ASA A37.35

Method of Test for Softening Point of Tar Products (Cube-in-Water Method), ASTM D61-38; ASA A37.36

Specifications for Calcium Chloride, ASTM D98-46T; ASA A37.37

Specifications for Coal-Tar Pitch for Stone Block Filler, ASTM D112-30; ASA A37.38

Specifications for Recut Granite Block for Pavements, ASTM D131-39; ASA A37.39

Specifications for Granite Block for Duxax Pavements, ASTM D132-39; ASA A37.40

Specifications for Mineral Filler for Sheet Asphalt and Bituminous Concrete Pavements, ASTM D242-39; AASHTO: M17-42; ASA A37.41

Methods of Testing Emulsified Asphalts, ASTM D244-42; AASHTO: T59-45; ASA A37.42

Recommended Practice for Bituminous Paving Plant Inspection, ASTM D290-39; ASA A37.43

Method of Sampling and Testing Calcium Chloride, ASTM D345-46T; ASA A37.44

Method of Test for Centrifuge Moisture Equivalent of Soils, ASTM D425-39; AASHTO: T94-42; ASA A37.46

Method of Test for Field Moisture Equivalent of Soils, ASTM D426-39; AASHTO: T93-42; ASA A37.47

Specifications for Asphalt Plank, ASTM D517-40; AASHTO: M46-42 and T77-38; ASA A37.48

Specifications for Preforned Expansion Joint Fillers for Concrete (Non-extruding and Resilient Types), ASTM D544-41; AASHTO: M58-42; ASA A37.49

Method of Test for Moisture Density Relations of Soil-Cement Mixtures, ASTM D558-44; AASHTO: T134-45; ASA A37.50

Method of Wetting-and-Drying Test of Compacted Soil-Cement Mixtures, ASTM D599-44; AASHTO: T135-45; ASA A37.51

Method of Freezing-and-Thawing Test of Compacted Soil-Cement Mixtures, ASTM D560-44; AASHTO: T136-45; ASA A37.52

Specifications for Cut-Back Asphalt (Rapid Curing Type), ASTM D597-46; AASHTO: M81-42; ASA A37.53

Specifications for Cut-Back Asphalt (Medium Curing Type), ASTM D598-46; AASHTO: M82-42; ASA A37.54

Specifications for Slow-Setting Emulsified Asphalt (for Fine Aggregate Mixes), ASTM D631-46; ASA A37.55

Specifications for Sodium Chloride, ASTM D632-43; ASA A37.56

Volume Correction Table for Tar and Coal-Tar Pitch, ASTM D633-44; ASA A37.57

Method of Test for Cement Content of Soil-Cement Mixtures, ASTM D806-47; ASA A37.58

Method of Test for Sulfonation Index of Road Tars, ASTM D872-46T; AASHTO: T108-42; ASA A37.59

Specifications for Cotton Mats for Curing Concrete Pavements, AASHTO: M73-38; ASA A37.60

Specifications for Subgrade Paper, AASHTO: M74-38; ASA A37.61

Method of Test for Quality of Water to be Used in Concrete, AASHTO: T26-35; ASA A37.62

Method of Test for Specific Viscosity (Engler), AASHTO: T54-35; ASA A37.63

Method of Test for Percentage of Bitumen in Bituminous Mixtures, AASHTO: T58-37; ASA A37.64

Method of Test for Flash Point with Tagliabue Open Cup, AASHTO: T79-42; ASA A37.65

Method of Test for Swell Characteristics of Aggregates, AASHTO: T101-42; ASA A37.66

Method of Test for Spot Test of Asphaltic Materials, AASHTO: T102-42; ASA A37.67

Method of Test for Inorganic Matter or Ash, AASHTO: T111-42; ASA A37.68

Method of Test for Abrasion of Coarse Aggregate by Use of the Los Angeles Machine (Revision of ASTM C131-46; ASA A37.7-1947)

Sponsor: American Society for Testing Materials

Graphical Symbols for Electron Devices, Z32.10 (Revision of Z32.10-1944)

Sponsors: American Society of Mechanical Engineers; American Institute of Electrical Engineers

Dimensions for 35-Millimeter Magazine Film (for Miniature Cameras), Z38.1.49

Method for Determining Maximum Safe Temperatures for Photographic Processing Solutions, Z38.8.19

Methods of Testing Printing and Projection Equipment, Z38.7.5 (Revision of Z38.7.5-1943)

General Purpose Photographic Exposure Meters (Photoelectric Type), Z38.2.6

Specifications for Photographic Grade Chemicals, Z38—

Sodium Hydroxide, Z38.8.225

Potassium Hydroxide, Z38.8.226

Sodium Carbonate, Monohydrate, Z38.8.-227

Sodium Carbonate, Anhydrous, Z38.8.228

Potassium Carbonate, Z38.8.229

Sodium Tetraborate, Z38.8.230

Sodium Metaborate, Z38.8.231

Ammonium Hydroxide, Z38.8.232

Mono-Methyl-Para-Aminophenol Sulfate, Z38.8.125

2, 4-Diaminophenol Hydrochloride, Z38.-8.127

Para-Aminophenol Hydrochloride, Z38.8.-129

Pyrogallol Acid, Z38.8.130

Catechol, Z38.8.131

Para-Phenylenediamine, Z38.8.132

Para-Phenylenediamine Dihydrochloride, Z38.8.133

Chlorhydroquinone, Z38.8.134

Potassium Iodide, Z38.8.201

Photographic Grade Chemicals (Continued)

Potassium Chloride, Z38.8.202
Sodium Chloride, Z38.8.203
Benzotriazole, Z38.8.204
5-Methylbenzotriazole, Z38.8.205
6-Nitrobenzimidazole Nitrate, Z38.8.206
Sodium Sulfite, Z38.8.275
Potassium Metabisulfite, Z38.8.277

Sponsor: Optical Society of America

By the Board of Examination—

Approval Requirements for Domestic Gas Ranges (Revision of Z21.1-1942)

Requirements for Installation of Domestic Gas Conversion Burners (formerly American Standard Requirements for Installation of Conversion Burners in House Heating and Water Heating Appliances) (Revision of Z21.8-1940)

Approval Requirements for Hot Plates and Laundry Stoves (Revision of Z21.9-1940)

Approval Requirements for Gas Space Heaters (Revision of Z21.11-1942)

Listing Requirements for Domestic Gas Conversion Burners (Revision of Z21.17-1940)

Listing Requirements for Automatic Main Gas Control Valves (Revision of Z21.21-1935)

Approval Requirements for Portable Gas Baking and Roasting Ovens (Revision of Z21.28-1941)

Sponsor: American Gas Association

By the Electrical Standards Committee—

Specifications for Shock-Testing Mechanism for Electrical Indicating Instruments, C39.3 (Revision of American War Standard C39.3-1943)

Sponsor: Electrical Standards Committee

Standard Submitted to ASA for Approval

Circular and Dovetailed Forming Tool Blanks (Revision of B5.7-1943)

Sponsors: American Society of Mechanical Engineers; Metal Cutting Tool Institute; National Machine Tool Builders' Association; Society of Automotive Engineers

American Standards Being Considered for Reaffirmation

By the Standards Council—

Road and Paving Materials, A37—

Method of Test for Penetration of Bituminous Materials (ASTM D5-25; ASA A37.1-1930)

Method of Float Test for Bituminous Materials (ASTM D139-27; ASA A37.2-1930)

Method of Test for Determination of Bitumen (ASTM D4-42; ASA A37.3-1943)

Method of Test for Amount of Material Finer than No. 200 Sieve in Aggregates (ASTM C117-37; ASA A37.4-1943)

Method of Test for Specific Gravity and Absorption of Coarse Aggregate (ASTM C127-42; ASA A37.5-1943)

Method of Test for Specific Gravity and Absorption of Fine Aggregate (ASTM C128-42; ASA A37.6-1943)

Method of Test for Sieve Analysis of Fine and Coarse Aggregates (ASTM C136-46; ASA A37.8-1947)

Method of Test for Distillation of Tar Products Suitable for Road Treatment (ASTM C136-46; ASA A37.9-1943)

Method of Test for Softening Point of Bituminous Materials, Ring-and-Ball Method (ASTM D36-26; ASA A37.10-1943)

Method of Test for Ductility of Bituminous Materials (ASTM D113-44; ASA A37.11-1945)

Method of Test for Proportion of Bitumen Soluble in Carbon Tetrachloride (ASTM D165-42; ASA A37.12-1943)

Method of Test for Residue of Specified Penetration (ASTM D243-36; ASA A37.13-1943)

Method of Test for Sieve Analysis of Mineral Filler (ASTM D546-41; ASA A37.14-1943)

Sponsor: American Society for Testing Materials

Definition of Safety Photographic Film, Z38.3.1-1943

Specifications for Projectors for Opaque Materials for Use in Small Auditoriums, Z38.7.4-1944

Specifications for Contact Printers, Z38.7.10-1944

Specifications for Printing Frames, Z38.7.11-1944

Specifications for Masks (Separate) for Use for Photographic Contact Printing, Z38.7.12-1944

Sponsor: Optical Society of America

American Standards Withdrawn

Water and Sediment in Petroleum Products by Means of Centrifuge, ASTM D96-46; ASA Z11.8-1947

Burning Quality of Kerosene Oils, ASTM D187-38; ASA Z11.17-1939

Sponsor: American Society for Testing Materials

Specifications for Liquid Toilet Soap, K14-1930 (F.S.B. No. 27)

Sponsor: National Bureau of Standards

New Project Requested

Packaging of Pipe Fittings of 2 Inch Diameter and Under

Requested by: American Gas Association

News About Projects

Specifications for Water Cooling Towers, A63—

Recent study by the Building Code Correlating Committee has led to discontinuance of the project on water cooling towers. This project was undertaken in 1939, at which time trade groups interested in water cooling towers were planning to present recommendations for work of the sectional committee. Because of interruptions by the war, no work in this field has been carried on. The project is being discontinued without prejudice and may be reactivated later should it appear likely that work on standards for water cooling towers will be supported by the trade groups concerned.

Indiana Limestone, A93—

A proposed American Standard Specification for Indiana Limestone, A93.1, submitted by the Indiana Limestone Institute, has been circulated to interested organizations for comment and acceptability.

Painting Specifications, A95—

Specifications for the painting and decorating industry have been submitted by the Painting and Decorating Contractors of America to the ASA for approval as an American Standard.

These specifications prescribe procedure—the manner and form of application of protective coatings and finishes for all types of surface.

Interior Marble, A94—

The Marble Institute of America has submitted its Standard Specifications for Interior Marble, A94, to the ASA for approval as an American Standard. This standard would allow the architect using

interior marble in a structure to specify the entire marble work by reference to the standard.

Copies of the specification were sent to the American Institute of Architects; American Society for Testing Materials; American Society of Civil Engineers; Associated General Contractors of America, Inc.; Association of American Railroads; Federal Works Agency, Public Buildings Administration; Fire Protection Group; National Housing Agency; Telephone Group; U.S. Department of Commerce, Bureau of Standards; U.S. Department of Commerce, Construction Division; and the Veterans Administration for their comments.

No unfavorable comments have been received and the standard is now before the Board of Examination for recommendation to Standards Council.

Pipe Flanges and Fittings, B16—

Sponsors: Heating, Piping, and Air Conditioning Contractors National Association; Manufacturers Standardization Society of the Valve and Fittings Industry; the American Society of Mechanical Engineers.

Dr E. LaCrosse, vice-president and director of engineering of the Stone & Webster Engineering Corporation, has been named chairman of the Sectional Committee on Standardization of Pipe Flanges and Fittings. Dr LaCrosse represents the American Society of Mechanical Engineers, one of the three sponsors of the project. Lester W. Benoit, general secretary of the Manufacturers Standardization Society of the Valve and Fittings Industry, who represents the Society on the committee, has been named secretary.

A new list of members of the sectional committee submitted by the sponsor organization to the American Standards Association for review and approval was approved

by the Mechanical Standards Committee. The scope of the project was reaffirmed as covering standardization of dimensions, designation of materials, and pressure-temperature rating of pipe flanges, pipe fittings for pipes carrying steam, gas, air, water, oil, ammonia, etc., other types of fittings attached to pipe, and standardization of face-to-face dimensions of ferrous gate, globe, angle, and check valves.

Power Switchgear, C37—

Sponsor: Electrical Standards Committee

A proposed revision of Tables 1, 2, 3, and 4 of the American Standard Schedule of Preferred Ratings for Power Circuit Breakers, C37.6-1945, is being voted on by the sectional committee.

The revised tables were prepared by the Joint Committee on Power Circuit Breakers of the Edison Electric Institute, Association of Edison Illuminating Companies, and the National Electrical Manufacturers Association. Only 78 ratings are listed in the 1948 proposed revision, as compared with 121 ratings in the present edition. Some of the lower voltage breakers have different voltage ratings than previously, and for all ratings an additional voltage rating ("maximum design kv") is shown in the revision. Instead of the 5-second short-time current ratings, 4-second short-time current rating values now appear.

Electrical Measuring Instruments, C39—

Sponsor: Electrical Standards Committee

The sixteenth draft of the proposed revision of the American Standard for Electrical Indicating Instruments, C39.1-1938, has been submitted by the subcommittee that prepared it to the sectional committee for comments. The suggestions of the sectional committee members will then be incorporated in another draft which will be given wider circulation.

The document is now complete as to switchboard and panel types of electrical indicating instruments and may be supplemented by further material covering portable instruments at a later date.

Electric Lamps, C78—

Sponsor: Electrical Standards Committee

The first meeting of the sectional committee since March 28, 1946, was held on May 11. The occasion for this meeting was completion by each of the two subcommittees on incandescent and fluorescent lamps of a stage of the work assigned to them.

The members present at the meeting approved the proposed standards on incandescent lamps developed by Subcommittee 1. These standards include eight tables listing incandescent lamps and 35 lamp outline drawings. The eight tables list characteristics of incandescent lamps in general use and considered to be standard types of lamps. They do not contain all such lamps because the subcommittee was not able to obtain outline drawings for some of them. This will be a continuing project.

The proposed standards for cold-cathode fluorescent lamps submitted by Subcommittee 2 on Electric Discharge Lamps were approved with minor deletions. The electrical characteristics in proposed standards for hot-cathode fluorescent lamps were ap-

proved by the committee but it was voted to refer the dimensional characteristics back to the subcommittee for further study.

A supplementary letter ballot on approval of all these proposed standards will be taken of the absent committee members.

The two subcommittees have formulated programs for further work. The only task outstanding for Subcommittee 1 is the procedure for recording miniature lamp trade numbers with the ASA. This is of paramount importance, in the opinion of the committee, in view of the proposal by the lamp manufacturers to identify such lamps merely by the trade number and the manufacturer's trade mark. The proposed standards for incandescent lamps will be kept up to date and new lamps added from time to time. Subcommittee 2 has eight items before it and it will continue to work on them.

It was pointed out that there was some question as to whether the subject of color of lamps was in the present scope of C78. The committee thereupon voted to recommend to the Electrical Standards Committee that the scope be enlarged to include color specifications for electric lamps.

Before adjourning the meeting, the committee passed a resolution expressing its regret on the death of D. W. Atwater, a member of the committee since its organization.

Specifications for Rubber Protective Equipment for Electrical Workers, J6—

Sponsors: Edison Electric Institute; American Society for Testing Materials

A meeting of Sectional Committee J6 was held on June 3 to discuss the organization and work of this committee and to decide what action should be taken with regard to the present American War Standards J6.1 through J6.5, which deal with rubber protective equipment for linemen. When the project was converted to a peacetime basis, the scope was changed to provide for such equipment for all electrical workers.

During the war, standards were produced for rubber materials and for leather protector gloves which, according to ASA procedure, were emergency standards and, with the end of the war, had to be reapplied or revised as regular American Standards, or withdrawn.

Before the war many individual public utility companies had their own private specifications for some of these items but in most cases these had been superseded by the J6 standards. Because this showed a real need for a continuation of these specifications under peacetime conditions, it was agreed by the committee that all five of the J6 War Standards should be reviewed, revised as necessary, and reapplied as American Standards.

The committee discussed the American War Standards, Rubber Insulating Line Hose, J6.1-1945; Rubber Insulating Hoods, J6.2-1945; Rubber Insulating Blankets, J6.4-1945; and Linemen's Rubber Sleeves, J6.5-1945; and voted to incorporate some suggested changes in first drafts of the proposed American standards. These are being sent to letter ballot action of the committee. A subcommittee was appointed to consider all suggestions for changes in the standard on Leather Protector Gloves, J6.3-1945, and to develop a recommendation for consideration of the J6 sectional committee.

To put the future work of the committee on a systematic basis, six subcommittees were established and chairmen appointed. These subcommittees and their chairmen are: Blankets, C. P. Xenis, American Society for Testing Materials; Sleeves, Ralph H. Titley, ASTM; Matting, William H. Meade, ASTM, Edison Electric Institute; Rubber Gloves, I. R. Dohr, EEI; Leather Protectors, Stewart J. Owen, Jr., National Bureau of Standards; Hose and Hoods, T. R. Claffy, Rubber Manufacturers Association.

It was also agreed at the meeting that, should the need arise for a revision of the American Standard Specifications for Electrical Gloves (Voltage Rating of Gloves, 3000 Volts), ASTM D120-40, ASA C59.12-1942, this would be undertaken by Sectional Committee J6, under whose jurisdiction it would now logically fall.

Liquid Toilet Soap, K14—

Sponsor: National Bureau of Standards, U.S. Department of Commerce

Because a number of specifications for soaps and other detergents developed by and submitted by the American Society for Testing Materials are now being considered by ASA for approval as American Standard, one of which is for a liquid toilet soap, the Consumer Goods Committee of the ASA has recommended to the Board of Review that the American Tentative Standard Specifications for Liquid Toilet Soap, K14-1930, be withdrawn as obsolete.

Office Standards, X2—

Sponsor: National Office Management Association

Subcommittee 2 on office papers has prepared four draft standards for circulation to members of the subcommittee. Three are proposed American Standard specifications for sulphite bond paper, type A, type B, and register sulphite bond. The fourth covers basic sheet sizes for bond papers and index bristols. These sizes are in accordance with Simplified Practice Recommendation R22-40, issued by the National Bureau of Standards.

Letter Symbols and Abbreviations for Science and Engineering, Z10—

Sponsors: American Association for the Advancement of Science; American Institute of Electrical Engineers; American Society of Civil Engineers; American Society of Mechanical Engineers; American Society for Engineering Education

The letter symbols for mechanics of solid bodies which were approved as an American Standard in 1942 have been re-issued as Z10.3-1948.

The members of subcommittee 7 on standardization of letter symbols for aeronautics and aerodynamics will meet in Los Angeles on July 16 to discuss formulation of a preliminary draft.

Acoustical Measurements and Terminology, Z24—

Sponsor: Acoustical Society of America

The Sectional Committee on Acoustical Measurements and Terminology, Z24, met for the first time in two years on April 24 in Washington, D. C. The chairmen of the

various subcommittees which had been working on their assigned projects gave reports of their groups for the consideration of the full committee as follows:

Subcommittee A on Acoustical Terminology—

At a joint meeting of this subcommittee and the Electroacoustic Committee of the Institute of Radio Engineers, held on April 20, it was agreed to invite the latter group to join Subcommittee A for the purpose of developing an American Standard acoustical terminology for the use of all groups concerned. Inasmuch as this revised organization meant considerable expansion of the work, it was agreed to set up a number of small subgroups to review each section of the terminology. Also, the work of the various groups concerned was scheduled so that a final printed edition would be available by October 1948.

Subcommittee B on Fundamental Sound Measurements—

Four standards developed by this subcommittee are now nearing completion. Since the two standards dealing with the calibration of microphones and with the coupler calibration of earphones require the use of a standard laboratory microphone, a draft specification for such a microphone has been drawn up. The fourth specification deals with the secondary calibration of microphones. Two proposed standards, Method for the Calibration of Laboratory Pressure Microphones, Z24.4, and Method for the Coupler Calibration of Earphones, Z24.9, were voted to letter ballot of the sectional committee.

Subcommittee C on Noise Measurement and Sound Level Meters—

Since more recent data concerning loudness level are available than those now contained in the American Standard for Noise Measurement, Z24.2-1942, the subcommittee plans to review such data and propose revisions if such action is deemed justified.

Subcommittee C has agreed that no significant basic improvements in sound level meter performance could be secured at this time by more or less obvious or conventional modifications or refinements in the American Standard on Sound Level Meters, Z24.3-1944. Despite certain shortcomings in the standard having to do, primarily, with the problem of objectively measuring noise to agree with subjective impressions, the subcommittee felt that much more work on problems of this nature in the field of psychoacoustics was indicated. Unless and until such information could be made available, there was no prospect of obtaining the desired correlation between objective meter measurements of noise and subjective judgments.

It is planned to review the Test Code for Apparatus Noise Measurement, Z24.7, in detail as rapidly as possible for submittal to the sectional committee at its next meeting.

Subcommittee E on Sound Insulation and Sound Absorption Measurement—

This subcommittee has been working toward its first goal of assembling a definitive statement of present practice in sound insulation and sound absorption measurements. Preliminary drafts and material have been prepared by subcommittee members and it is planned to have a more or less complete document prepared by the time of the fall meeting of the Acoustical

Society of America. This material might then be submitted as a "working standard" for present practice.

Subcommittee F on Audiometry and Hearing Aids—

The new minimum specification for audiometers, which supersedes the specification prepared in 1937, has been approved by the subcommittee and is now before the sectional committee. Several members of the committee had questioned the wisdom of issuing a specification at this time, the principal objection being that the threshold pressures had been based wholly on the U.S. Public Health Service Survey data obtained in 1936-37. Subcommittee F had considered the possibility that there should be a basic redetermination of threshold pressures, but was unable to find any laboratory which could undertake the work at this time. In spite of these objections, the consensus was that the specification should be issued with the idea in mind that threshold pressures and other specified quantities could be amended at a later date. Both the manufacturers of audiometers and testing agencies had felt very strongly that there should be a specification issued as soon as possible, even though it might require amendment after only a year or so.

It was pointed out at the meeting that the American Medical Association had worked rather closely with the ASA group in preparing their specification for audiometers and was most anxious to adopt the present proposal, at least as an interim specification. The sectional committee finally agreed to send a letter of explanation to its members, incorporating the facts brought out at the meeting and the proposed editorial modifications and, if the negative votes on the standard did not increase, to submit it to the sponsor with recommendation for favorable action.

The subcommittee also reported to the sectional committee that there are numerous other problems in connection with audiometry that must be tackled and solved over a period of years. This will no doubt result in further amendments to the specification on audiometers. Some of the outstanding problems are the following: (1) Development of a better artificial ear (coupler), based possibly on one which has been constructed and used in England; (2) Standardization of the external shape and acoustic impedance of the earphone; and (3) Determination of bone conduction thresholds. The manufacturers feel that this is an urgent problem which should be tackled at once.

Subcommittee G on Underwater Sound Measurement—

The most urgent need in this field was for underwater sound terminology, so that the confusion which existed during the last war would not occur in the event of another emergency. Subcommittee G has also been working jointly with Subcommittee A on common terminology. Work on fundamental sound measurements in liquids is also under consideration.

General Discussion

In the discussion of the method of unifying letter symbols used in the field of acoustics, it was recommended that the secretary of the Z24 sectional committee write to the chairman of the Sectional Committee on Letter Symbols and Abbreviations for Science and Engineering, Z10, requesting that work be undertaken to establish standard letter symbols for use in the field of acoustics.

It was also recommended that the Acoustical Society take action to start work in the field of psychoacoustics through means other than sectional committee Z24. The sectional committee enlarged the scope of the vibration subcommittee to include shock as well as vibration. The Navy has expressed a deep interest in this field, and reported at the meeting on the work it had been doing along these lines.

Graphical Symbols and Abbreviations for Use on Drawings, Z32—

Sponsors: American Institute of Electrical Engineers; American Society of Mechanical Engineers

The subgroup on heat-power equipment symbols is now circulating a list showing heat-power apparatus equipment symbols to industry for comment.

Two proposed American Standards—Graphical Pipe Fittings, Valves, and Piping Symbols for Use on Drawings, Z32.23, and Graphical Heating, Ventilating, and Air-Conditioning Symbols for Use on Drawings, Z32.24—are both before the sectional committee for approval.

Another proposed American Standard, Graphical Plumbing Symbols for Use on Drawings, Z32.22, has been submitted by the sectional committee to the sponsors.

In addition, a proposed revision of American Standard Graphical Symbols for Electronic Devices, Z32.10-1944, has been submitted to the Standards Council for approval.

Standardization in the Field of Photography, Z38—

Sponsor: Optical Society of America

A committee to investigate all aspects of a proposed extension in scope for Sectional Committee Z38 to cover matters of safety was authorized at the May 7 meeting. Hazards arising from the use of photographic equipment and chemicals are not covered in the Z38 standards and an extension in the scope of work would be necessary before the committee could pass on such requirements. The small committee to be appointed will report its findings at the next meeting of the sectional committee.

The possibility of the formation of a correlating committee to cover both still and motion picture photography was another principal topic of discussion. It was pointed out that the organization of a Photographic Correlating Committee would dispose of the overlapping jurisdiction of Z38 and of Sectional Committee Z22 on Motion Pictures and bring cinematography and other aspects of photography under systematic supervision, particularly for the promotion of international standards. The committee thereupon voted to request the Optical Society of America, sponsor of project Z38, to discuss this matter with the Society of Motion Picture Engineers, sponsor for the Sectional Committee on Standards for Motion Pictures, Z22.

Reports of the subcommittees were given at the meeting, and it was voted to send to letter ballot of the full committee eight proposed American Standards and four proposed revisions of American Standards. Two American Standards, Designation of Emulsion Side of Photographic Sheet Films, Z38.1.42-1944, and Practice for Temperature Processing Solutions, Z38.8.1-1944, were voted to be sent to the sponsor for submittal to ASA for reaffirmation.

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